



# City of Boston

Public Works Department  
&

Transportation Department

## 2016 Utility Construction

### Kickoff Meeting

Friday, March 18th, 2016

Historic Great Hall, Faneuil Hall

**Mayor Martin J. Walsh, City of Boston**

**Michael Dennehy, Commissioner of Public Works**

**Chris Osgood, Chief of Streets**

**Gina Fiandaca, Commissioner of Transportation**

**Kristen McCosh, Commissioner for the Office of Persons with Disabilities**

**Jerome Smith, Chief of Civic Engagement**

**Daniel Manning, Chief of Staff, Civic Engagement**

**Michael Brohel, Deputy Commissioner BPWD**

**Katie Choe, Chief Engineer BPWD**

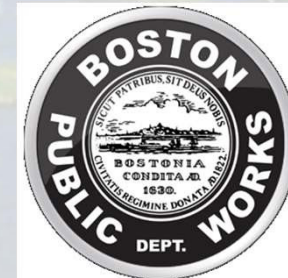
**Para Jayasinghe, City Engineer BPWD**

**Michael Somers, Senior Civil Engineer BPWD**

**Ed Hesford, Supervising Traffic Engineer BTM**

**Anne McNeil, Permitting Office BPWD**

**Mark Cardarelli, Supervisor of Utility Coordination & Compliance BPWD**



**CIU : Construction Inspection Unit**

# Why We Have This Meeting

- \* The City acknowledges the busy schedules associated with construction.
- \* Your work impacts both the residents of Boston and the City's infrastructure.
- \* Working in Boston comes with higher expectations than working in other cities/towns.
- \* There is a need to meet before the start of every construction season. Reinforcement is a “Good Thing”.
- \* **Attending this meeting ensures that you will fully understand the City's Rules and Specifications, as well as the expectations the City has for everyone during construction.**
- \* After leaving today's meeting it is **unacceptable** to later state that you did not understand or “**were not aware**” of the City's Rules and Specifications.

# Winter Moratorium Ends April 11<sup>th</sup>, 2016

- \* Generally extends from November 15<sup>th</sup> through April 15<sup>th</sup>
- \* Materials & workmanship negatively effected by cold weather.
- \* All permits must be approved by Moratorium Board.
- \* Plated locations hazard to City plowing efforts.



# Winter Moratorium Board

- \* In order to obtain permission to work during the Winter Moratorium
- \* All pending bad patches, sidewalk locations not repaired within 60 days, pavement markings, and loop detectors are fully repaired or restored.
- \* Your company must be in good standing with the City (Compliance Rating)
- \* You must bring in a Hardship Letter with your request indicating:
  - \* Where the work will take place
  - \* Why the work can't wait until spring
  - \* How long the work will take
- \* The Winter Moratorium Board will vote either Yes or No, dependent upon the request and forecasted weather.



# Winter Work Procedures

- \* All crews must follow Winter Moratorium Guidelines
  - \* <http://www.cityofboston.gov/publicworks/construction/excavation.asp>
- \* All plates must be Recessed unless otherwise approved by the PWD
  - \* A leveling course of HMA material will be used when recessing the plates
- \* Crews must fax a copy of the Winter Plate Notification Form to the City Snow Office and the CIU whenever a plate is placed, no matter what time of day or night.
- \* Crews must be prepared to backfill, pave, and remove all equipment from the work site upon request by the PWD for pending inclement forecasts.
- \* **All Permittees will be required to provide snow plowing and snow removal of their entire work zone(s) during the Moratorium period.**
- \* Cold weather should not negatively affect your final product.
- \* Any repeated Violations or lack of cooperation will result in a suspension in your ability to receive permits during the Winter Moratorium.

# Winter Inspection Requirements

- \* Permittees are to perform post-inspection of all permits issued during the Winter Moratorium 14 days after the work has been completed, and 30 days after the 14 day inspection.
- \* Inspection findings are to be emailed back to the BPWD Construction Management Division reporting the status of the patch/trench.
- \* Major utility companies will provide weekly reports summarizing their findings in advance of the Moratorium meetings.
- \* A failure to submit the required inspection findings will result in suspension of all active work sites, as well as no longer being issued permits during the Winter Moratorium.

# Cold Weather Leads to Repercussions That Last Well Beyond the Winter

- \* Castings needing patching
- \* Sunken castings needing adjustment or full replacement
- \* Patches and trenches failing
- \* Frost heaves
- \* Potholes
- \* Sink holes
- \* Cracking of roadways
- \* Damaged sidewalks
- \* Edge stone sinking

# Pothole and Eroded Casting Repairs

- \* **You own 30'' around your castings.**
- \* Thank you for allocating resources during the winter to patch your castings.
- \* However, there is still more to be done!
- \* More resources will need to be allocated beginning immediately, until the weather becomes consistently warm.
- \* **We won't hesitate to stop permits if we believe you're ignoring these repairs.**



# Commitment to Repair Failed Street Cuts or Infrastructure

- \* **Permittees must repair all unrepaired bad patch locations before permits will be issued.**
  - \* The City will consider approving permits to Permittees who designate crews to simultaneously repairing locations while new work takes place.
  - \* The PWD will not waiver on that position.
- \* The repairs cannot be minimal or superficial. The crews must fully address the roadway issues.

- \* If the CIU determines your crews are only sporadically addressing the problematic locations then the City will reassess whether or not to continue issuing permits for new work.
- \* The use of milling machines and spreaders may be the only alternative. We know that weather will play a determining factor on when milling and paving can take place. The CIU will make the final determination.
- \* Until the issues have been addressed the CIU will be sending daily reports of all unacceptable street cut work. In addition we will be sending a casting report as well. This will be your working list. Starting April the list will be sent on a weekly basis.
- \* Your company should also address any needs you've identified that are not already on the list as well.

# Review of 2015 Updates

- \* Rules and Specifications updated April 6, 2015
- \* CIU Report Card on a 100% scale (Compliance Rating)
- \* 6 inch backfill requirement
- \* CIU Inspectors submit live reports directly from the field

# New and Emphasized for 2016

- \* Improvement in Overall Compliance
- \* Online Emergency Notification Form
- \* Online Call-In Notification Form
- \* COBUCS Conflict Notification Protocol
- \* COBUCS Guaranteed Street Conflict From
- \* Written Hardship Requests
- \* Guaranteed Street Repairs
- \* Sinkhole Repair Protocol
- \* Review Repair Timelines
- \* Material Testing Review
- \* Sidewalk Access During Construction
- \* Proper Signage and Removal
- \* Capital Program, Future “Must Pave” Locations
- \* Steve Kane is retiring in June after 13 years with the CIU



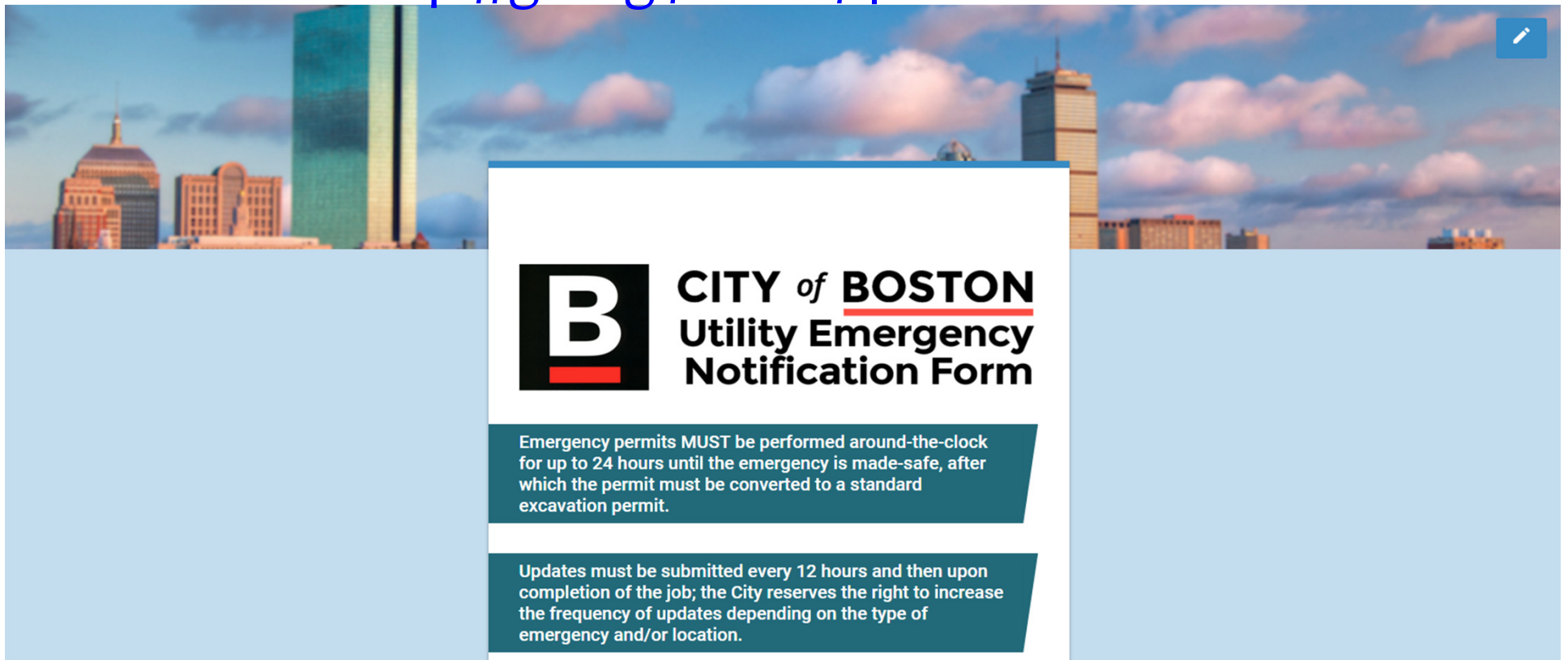
# Improvement in Overall Compliance Rating

- \* Over the past three years the Utility Companies and Private Contractors have been steadily improving their construction practices.
- \* Improvement seen in:
  - \* Reduction in stockpiling without approval
  - \* Temporary Sidewalks left smooth & level
  - \* Use of suitable gravel material, both recycled and new processed
  - \* The final paving product, including cutting patches square and following Utility Repair Tag standards.
- \* Despite an overall improvement in compliance, crews need to focus on how they leave their plates at the end of the day.
  - \* Opening Secured compliance dropped 1% between 2014 and 2015.
- \* Permittees need to do a better job repairing their identified bad patches within the timeline specified in the Rules and Specifications.

# Emergency Call-In Form

Utility Companies who have been granted by MassDOT's DPU to perform emergency repairs in the interest of public safety must submit all emergency notifications through the City of Boston Utility Emergency Notification Form.

<http://goo.gl/forms/4Ulsx6KRUa>

The image shows a digital form titled "CITY of BOSTON Utility Emergency Notification Form". The form is overlaid on a background image of the Boston skyline. The form itself has a white header with the City of Boston logo (a black square with a white 'B' and a red horizontal bar) and the title. Below the header, there are two teal-colored boxes containing text. The first box states: "Emergency permits MUST be performed around-the-clock for up to 24 hours until the emergency is made-safe, after which the permit must be converted to a standard excavation permit." The second box states: "Updates must be submitted every 12 hours and then upon completion of the job; the City reserves the right to increase the frequency of updates depending on the type of emergency and/or location." In the top right corner of the form, there is a small blue square icon with a white pencil, indicating that the form is editable.

**CITY of BOSTON**  
**Utility Emergency**  
**Notification Form**

Emergency permits **MUST** be performed around-the-clock for up to 24 hours until the emergency is made-safe, after which the permit must be converted to a standard excavation permit.

Updates must be submitted every 12 hours and then upon completion of the job; the City reserves the right to increase the frequency of updates depending on the type of emergency and/or location.

Please fill out every form entry. Do not leave any blanks.

Status \*

Choose ▼

Notification

Update

Completed

E-Mail \*

Please enter your e-mail address below:

Your answer

Utility Company \*

Choose ▼

If "Other," please state company name:

Your answer

Permit Number EMER- \*

EMER-

Your answer

Type of Emergency \*

Choose

Dig in Doubt (Leak on Service)

Water Main Repair (Leak on Main)

Control Dig & Reset (Leak on Service)

Indicate whether this is a new call, an update, or if you have completed the work.

Include the email address for whoever the contact person within the company will be.

If you are a major utility, select your name from the dropdown. If you are not on the dropdown choose "Other" and fill in the box below.

Utility Companies should put their 6-Digit Emergency number here. Private Contractor emergencies should put 000000 until a valid permit is obtained.

Select the reason for the Emergency Repair from the dropdown.

House Address or Intersection \*

Your answer

List the house address, or range limits.

Street Name \*

Your answer

List the name of the street the emergency is on.

Neighborhood \*

Choose

Choose the neighborhood the street is in from the dropdown.

Date \*

Date

mm/dd/yyyy

Indicate the date and time that the Emergency occurred.

Time \*

Time

: AM

Supervisor Name

Your answer

Provide the name and contact number for the Supervisor on duty at the time of the Emergency.

Supervisor Cell

Your answer



Dispatch Number

Your answer

Add the phone number to the office dispatch if applicable.

Police Detail

☐ Y

☐ N

If a Police Detail has been requested please indicate so.

Number of lanes closed

Your answer

If the work is in the roadway tell us how many lanes are being affected.

Street Closed

☐ Y

☐ N

Check here if you need to close the street for your repairs.

Detour

☐ Y

☐ N

If a street is closed, has an approved detour been posted?

Plating

☐ Y

☐ N

Will the work need to be plated overnight?

Plate Ahead Signs

☐ Y

☐ N

Number of plates

Your answer

Number of cuts

Your answer

Approximate size(s)

Your answer

Estimated Completion Time

Your answer

Completed? \*

☐ Y

☐ N

Comments

Please provide a brief reason for work and description of scope:

Your answer

SUBMIT

If a location needs to be plated, are the Plate Ahead Signs up?

How many plates will be needed to secure the opening(s)?

How many cuts will there be, and what are their approximate dimensions?

When do you think the work will be done by? Date or Time.

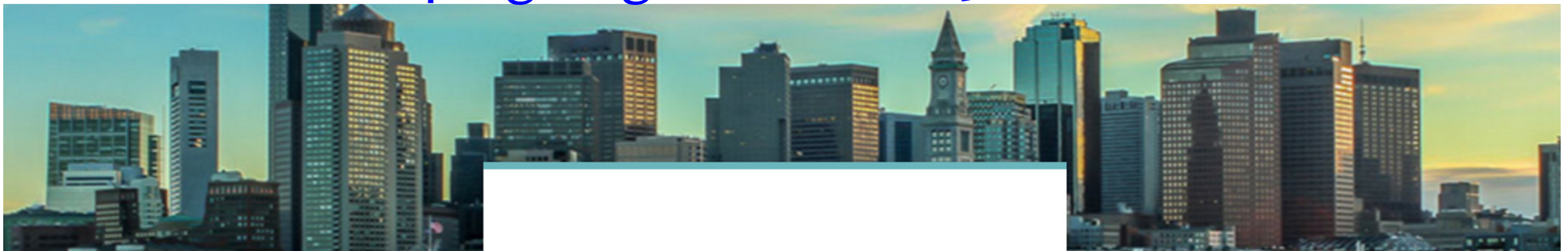
If this is a notification for completed emergency work please choose Y, otherwise choose N.

Provide additional details on what kind of work is taking place and why.

# Utility Call-In Form

All Permittees must notify the BTD and PWD 24 hours prior in advance of assigning a crew to a permitted work site by submitting their information into the City of Boston Utility Call-In Notification Form.

<http://goo.gl/forms/Vmc3M1Vf7d>



## **CITY of BOSTON** **Utility Call-In** **Notification Form**

Permittees are required to notify the CIU a minimum of 24 hours before the start of a job, any backfilling and paving operations, as well as when the job is completed.

**Note:** all locations must be leafleted and posted a minimum of 48 hours in advance. On major jobs, only post where you are going to be working during the next 48-72 hours. Remove all signs once the job is completed.

**E-Mail \***

Please enter your e-mail address below:

Your answer

Include the email address for whoever the contact person within the company will be.

**Permittee \***

Choose

Select the company name written on the permit.

**Contractor \***

Choose

If you are a subcontracting your work out please indicate who will be doing the excavation.

**Permit Number \***

EXCA-

Your answer

Type the 6-Digit Permit number here.

**Start Date \***

Date

mm/dd/yyyy

Indicate the date and time that the Call-In is being submitted.

**Start Time**

Time

\_\_ : \_\_ AM ▼

If work is completed put the date and time of the completion.



Street Name \*

Your answer

List the name of the street the work will take place on.

House Number(s) \*

Your answer

List the from house address, or range limits.

From Limit

Your answer

If the permit does not list house addresses provide the starting intersection limit of work.

To Limit

Your answer

If the permit does not list house addresses provide the ending intersection limit of work.

Neighborhood \*

Choose



Choose the neighborhood the street is in from the dropdown.

Weekend/Night Work?

Check the following if applicable:

☐ Weekend

☐ Night

Determine whether or not BTD allows for your work to be performed at night or on weekends.

Type of Work \*

- ☐ Service
- ☐ New Main or Conduit
- ☐ Emergency
- ☐ Conversion from Previous Emergency
- ☐ Maintenance

Activities \*

- ☐ Start
- ☐ Backfill
- ☐ Pave
- ☐ Completed

Supervisor Name \*

Your answer

Supervisor Cell # \*

Your answer

Comments

Your answer

SUBMIT

Indicate what repair type the work is.

Indicate whether this is a new call, notification for a backfill, pave, or completion of work.

Provide the name and contact number for the Supervisor(s) on duty at the time of the notice.

Provide additional details on what kind of work is taking place and why.

# COBUCS Conflict Notification Protocol

## (Must be emailed as soon as conflict is found in COBUCS)

PERMITS WILL BE HELD IF NO EMAIL IS SUBMITTED

- \* When you are in conflict with any City of Boston you must provide the following details:
  - \* What is the type of work? \_\_\_\_\_ (service, maintenance, capital improvement = new mains, conduits, etc.)
  - \* What is the approximate start date? \_\_\_\_\_
  - \* What is the approximate end date? \_\_\_\_\_
  - \* Do you plan on any other work within the proposed paving limits?

NOTE: If your work is being done for a new building development, or in preparation for a demolition, please indicate so in the email.

- \* The engineers in charge of the paving programs must be included in the conflict email so that they can comment at any time. The COBUCS Conflict will not be released without a response from the Engineers in charge of that program. This could include coordination details.
- \* We prefer that conflict emails contain a Print Screen (snapshot of the screen image) of the conflict. If you need instructions on how to create a Print Screen image of your conflict please email [Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov) and he will provide you a walk-through.

# COBUCS Conflict Email Distributions

## ARP

Asphalt Resurfacing  
(also ARP FC or ARP with contract year)

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Kevin.Linsky@boston.gov](mailto:Kevin.Linsky@boston.gov)  
[Michael.Haggerty@boston.gov](mailto:Michael.Haggerty@boston.gov)  
[MattW5o8@gmail.com](mailto:MattW5o8@gmail.com)  
[Serge.Lindor@boston.gov](mailto:Serge.Lindor@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

## CRP

Roadway Overlay  
(also CRP FC or CRP with contract year)

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Martin.Lee@boston.gov](mailto:Martin.Lee@boston.gov)  
[Tom.Mougamian@boston.gov](mailto:Tom.Mougamian@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

## TIGER

Reconstruction work and Connect Historic  
Boston bicycle path work  
(includes all entries that begin with TIGER Grant)

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Kay.Barned-Smith@boston.gov](mailto:Kay.Barned-Smith@boston.gov)  
[William.Egan@boston.gov](mailto:William.Egan@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

## RECON

Reconstruction  
(also RECON FC or RECON FY with year)

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Amidu.Falade@boston.gov](mailto:Amidu.Falade@boston.gov)  
[Bob.Astrella@boston.gov](mailto:Bob.Astrella@boston.gov)  
[William.Egan@boston.gov](mailto:William.Egan@boston.gov)  
[Zachary.Wassmouth@boston.gov](mailto:Zachary.Wassmouth@boston.gov)  
[John.Vozzella@boston.gov](mailto:John.Vozzella@boston.gov)  
[Tan.Pham@boston.gov](mailto:Tan.Pham@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

## SWK RECON

Sidewalk Recon  
(also SWK RECON FC or SWK RECON FY with year)

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Amidu.Falade@boston.gov](mailto:Amidu.Falade@boston.gov)  
[Bob.Astrella@boston.gov](mailto:Bob.Astrella@boston.gov)  
[William.Egan@boston.gov](mailto:William.Egan@boston.gov)  
[Zachary.Wassmouth@boston.gov](mailto:Zachary.Wassmouth@boston.gov)  
[John.Vozzella@boston.gov](mailto:John.Vozzella@boston.gov)  
[Tan.Pham@boston.gov](mailto:Tan.Pham@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

# COBUCS Conflict Email Distributions

## **BTD Design**

**BTD Design Recon**

**BTD Proposed Recon**

**BTD/MassDOT**

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)

[Charlotte.Fleetwood@boston.gov](mailto:Charlotte.Fleetwood@boston.gov)

[Patrick.Hoey@boston.gov](mailto:Patrick.Hoey@boston.gov)

[William.Egan@boston.gov](mailto:William.Egan@boston.gov)

[Zachary.Wassmouth@boston.gov](mailto:Zachary.Wassmouth@boston.gov)

[Alice.Brown@boston.gov](mailto:Alice.Brown@boston.gov)

[Bob.DAmico@boston.gov](mailto:Bob.DAmico@boston.gov)

[Rachel.Szakmary@boston.gov](mailto:Rachel.Szakmary@boston.gov)

[William.Conroy@boston.gov](mailto:William.Conroy@boston.gov)

[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)

[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)

[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

## **Traffic Signal Insta**

**Signal Installation**

**Traff Conduit Repair**

**BTD**

Each refer to the installation of traffic lights, upgrades of pedestrian access ramps, pavement markings and loop detectors.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)

[Don.Burgess@boston.gov](mailto:Don.Burgess@boston.gov)

[Wilson.Aleman@boston.gov](mailto:Wilson.Aleman@boston.gov)

[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)

[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)

[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

The following are conflicts that are not for street improvement or upgrade work. These conflicts are for City Departments or other entities that request occupancy reservations for non-excavation work.

When you are in conflict with any of these entities you must review your scope of work with them and only after receiving an emailed response from that entity will we release your conflict.

### Bike Lane

Bike Lane and Bike Shared refer to pavement markings reserved for bike travel.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[stefanie.seskin@boston.gov](mailto:stefanie.seskin@boston.gov)  
[njackson@tooledesign.com](mailto:njackson@tooledesign.com)  
[Kim.Foltz@boston.gov](mailto:Kim.Foltz@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

### Food Truck

Food Truck Parking refers to reserved areas on City streets and sidewalks where Mobile Food Trucks have been permitted to temporarily park and sell food or merchandise.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Foodtruckchallenge@boston.gov](mailto:Foodtruckchallenge@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

### Hubway Bike Share Station

Hubway Station refers to reserved areas on City streets and sidewalks where Hubway bicycles are charged and stored for use.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Kylegates@altabicycleshare.com](mailto:Kylegates@altabicycleshare.com)  
[Stefanie.Seskin@boston.gov](mailto:Stefanie.Seskin@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

### BID

Business Dist Alert refers to reserved streets in the Downtown Boston Business Improvement District (BID). With major shopping and restaurants within this district, all construction work needs to be coordinated with the BID.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[MTesta@bostonbid.org](mailto:MTesta@bostonbid.org)  
[SBrookes@bostonbid.org](mailto:SBrookes@bostonbid.org)  
[RSansone@bostonbid.org](mailto:RSansone@bostonbid.org)  
[ALauricella@bostonbid.org](mailto:ALauricella@bostonbid.org)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)

### Filming

#### BTD Spc Evnt (Special Event)

Each refer to the reservation for either a commercial, major film, or special event such as a road race, parade, festival, block party, etc.

[Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)  
[Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)  
[Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)  
[Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)



City of Boston Public Works Department  
**GUARANTEED STREET COBUCS CONFLICT DETAILS**

COBUCS GUARANTEED PAVING DATE:

**PERMITTEE INFORMATION**

Company Name:

Date of COBUCS Entry:

COBUCS #

Contact Name:

Contact Phone Number:

Email:

Place X Next to Appropriate Category of Who is Requesting Work

Home Owner	<input type="checkbox"/>	Developer	<input type="checkbox"/>	General Contractor	<input type="checkbox"/>
Site Plan Engineer	<input type="checkbox"/>	Business Owner	<input type="checkbox"/>	In-House	<input type="checkbox"/>

(UTILITY COMPANIES ARE NOT REQUIRED TO FILL OUT BELOW DETAILS UNLESS REQUESTED BY CITY)

Originator Name:

Company Name:

Date of Request:

Contact Phone Number:

Email:

**SCOPE OF WORK INFORMATION**

Neighborhood:

Street Name:

Address:

Limits (From-To) If Applicable:

Explanation of Why Guaranteed Street Needs To Be Cut Into

Work Type: Place X Next to Appropriate Name

Service (Existing Structure)	<input type="checkbox"/>	Service (New Building Construction)	<input type="checkbox"/>	Service (Oil to Gas) [Gas Companies Only]	<input type="checkbox"/>
Maintenance	<input type="checkbox"/>	New Main/Conduit	<input type="checkbox"/>	Casting Repair/Replacement	<input type="checkbox"/>
Emergency	<input type="checkbox"/>	Emergency Illegal Sewer Connection (BWSC Only)	<input type="checkbox"/>	Emergency Conversion to EXCA	<input type="checkbox"/>
Emergency (Private Contractors)	Water <input type="checkbox"/>	Sewer <input type="checkbox"/>	Sprinkler <input type="checkbox"/>	Other <input type="checkbox"/>	<input type="checkbox"/>

Excavation Area Information (Length X Width)

Estimated Number of Cuts:

Cut Size 1:	Cut Size 2:	Cut Size 3:
Cut Size 4:	Cut Size 5:	Cut Size 6:

Additional Cut Details:

Total Estimated Sq Feet Area:

Estimated Time Table of Work

Estimated Start Date:

Estimated Completion Date:

# Guaranteed Street Cut Request Form

- \* When COBUCS notifies you that your proposed work is in conflict with a Guaranteed Street you must immediately fill out the Guaranteed Street COBUCS Conflict Details form and email it to the Public Works Department (see below).
- \* In addition to the form, your company must submit a Hardship Letter to Chief Engineer, **Katie Choe**, explaining the need to excavate the Guaranteed roadway and agreeing to pay for the associated cost of restoring the roadway to it's Guaranteed state.
  - \* [Katie.Choe@boston.gov](mailto:Katie.Choe@boston.gov)
  - \* [Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov)
  - \* [Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov)
  - \* [Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov)

# Guaranteed Street Cut Procedures

- \* **Dig Safe must not be called on non-emergency work into a Guaranteed Street until the request has been approved by the City.**
- \* All openings must be saw cut prior to asphalt placement.
- \* **Mandatory CIU inspection for all backfill and paving operations, unless otherwise approved by the PWD.**
- \* Vibratory roller must be used on **ALL** phases of patch/trench paving.
  - \* If a vibratory roller is unable to fit within the patching area during the **BINDER** course a plate compactor will be allowed. A vibratory roller is **MANDATORY** for the top course.
- \* “Average” or even “Good” patches will **NOT** be acceptable!
- \* All final patches must be “**Excellent**”!

# Sinkhole Protocol: Less than 3 Yrs

- \* If a sinkhole develops within a Permittee's excavation that is less than 3 years old, and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole.
- \* The City will also notify any other Permittee with a cast iron structure in the affected area. Those Permittees will be responsible for investigating to determine if their infrastructure may be the cause of the sinkhole. Unless the investigation determines otherwise, the owner of the permitted excavation will be considered the responsible party and will be required to perform the repair.
- \* Contesting Sinkhole Responsibility on Excavation Work Less than 3 Years Old  
If a Permittee feels that previous excavation work is responsible for the sinkhole, then the burden of proof belongs to that Permittee.
- \* **The City will not be responsible for the repair of any sinkholes that happen within previous or active utility excavation work less than 3 years old.**

# Sinkhole Protocol: Over 3 Yrs

- \* The City will only be responsible for a sinkhole in an excavation where the original work is greater than 3 years old, is not within 30 inches of a cast iron structure, and testing determines there are no leaking pipes.
- \* If during the investigation it is determined that the sinkhole is due to the failure of underground infrastructure, the City will hold the appropriate utility responsible for the repair of the sinkhole and for the costs incurred by the City for the investigation and any temporary repairs undertaken by the City.

# Sinkhole Proximity to Castings

- \* If a sinkhole develops within 30 inches of a casting belonging to a Permittee and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole per City Ordinance 11-6.20.

# Sinkhole Repair Timelines

## Public Safety

- \* **Protect Within 1 Hour of Notification. Start Repairs Under the Emergency Dig Safe Guidelines**
- \* If the sinkhole is a threat to public safety then your company must treat the repair as an emergency protecting the area within 1 hour, and dispatching a repair crew to be on site within 3 hours ready to perform all necessary repairs.
- \* All Dig Safe requirements are to be followed. Protection of the site is mandatory until the excavation can proceed.



# Sinkhole Repair Timelines

## Non-Public Safety

- \* **Protect Within 4 Hours of Notification. Start Repairs Within 72 Hours of Dig Safe Notification.**
- \* If the sinkhole is **not** determined to be a public safety concern at the time of notification and/or during your inspection your company must protect the sinkhole with cones, barrels, barricades, saw horses, tape, etc. and make the necessary repairs within 72 hours.
- \* This will require your company to notify Dig Safe within the 4 hours of the notification, or at the earliest availability. Your company will be responsible for monitoring the sinkhole until all repairs have been made.
- \* **If at any time the sinkhole becomes a threat to public safety then you will be required to make repairs in accordance with the Public Safety Protocol.**
- \* **All Dig Safe requirements are to be followed.** Protection of the site is mandatory until the excavation can proceed.

# Sinkhole Notification for Inspection

- \* When your company has assigned a crew to perform sinkhole repairs you must notify the Public Works Department by submitting the work through the online Emergency Call-In Form.
  - \* NOTE: If your crew is unable to connect to the form online and there is no one in the office to submit the emergency you must notify the PWD by calling the office at [617-635-4950](tel:617-635-4950) and leave your information with the BOS:311 staff.
- \* **No crew should hold up repairs awaiting inspection personnel or notification.** It is the responsibility of your company to notify the Public Works Department, preferably before the crews arrive on site.

# Sinkhole Repair Standards

- \* The Permittee will be required to fully expose the sink hole to determine the extent of the repair. The Permittee will then be required to assess the condition of the exposed subbase material. Any subbase material found unsuitable (wet, contaminated, etc.) must be removed until a dry, solid, and suitable subbase is found. Then approved processed gravel must be used to fill and compact the sinkhole.
- \* Permittees are required to match the existing asphalt cross section of the street with use of a mechanical roller. Any street with a concrete or cobblestone base must be restored with approved concrete material to the existing cross section before asphalt is placed.
- \* All requirements for backfill and asphalt paving in the Rules and Specifications for Excavation Activity in the City of Boston must be followed.

# BAD PATCH RESPONSE TIMELINES

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc...)	Protection site within <b>1 Hour</b> ; Mobilize crew for repair <b>within 3 Hours</b>
2" or Greater Settled	Must repair within <b>2 business days</b> of notification
Less than 2" Settled	Within <b>7-13 Days</b> of notification
Permanent Sidewalk Repair	Return to existing within <b>60 Days</b> after initial repair (Alternative - PWD will allow Repairs by Neighborhood = Increases production)
Pavement Marking/Loop Detectors	Within <b>3 Days</b> of notification

# CASTING REPAIR RESPONSE TIMELINES

Erosion Repairs	Response Time
Public Safety - Erosion	Temp Repair within 3 Hours Perm Repair within 14 Days
Non Public Safety - Erosion	IP and 1's Temp Patch within 1 Business Day 2's & 3's Temp Patch within 2 Business Days Perm Repair within 14 Days
Adjustment Repairs	Response Time
Public Safety - Adjustment	Make Safe within 3 Hours Repair within 48 Hours
Non Public Safety - Adjustment of 2+"	Make Safe within 24 Hours Repair within 7 Days
Non Public Safety - Adjustment under 2"	Repair within 30-60 Days

# Gravel Requirements

of MassDOT M 1.03.11

## Recycled material for backfill

Sieve Size		Specifications
Standard	Alternate	M1.03.1 Processed Gravel for Subbase
75 mm	3"	100
37.5 mm	1-1/2"	70-100
19 mm	3/4"	50-85
4.75 mm	#4	30-60
0.075 mm	#200	0-10
Percent Recycled Material		
Asphalt, %		5 max
Soil and Natural Gravel, %		50 min

- \* Boston is allowing the use of recycled material that meets M1.03.11 specifications for utility excavation backfill.
- \* Boston knew that recycling is the way of the future and we understand that the use of recycled material for utility backfill will be the standard soon.



# Gravel Testing

- \* Annual gravel testing and lab-certification of current maximum dry density, and corresponding moisture content (ASTM D 1557) of granular material has been performed and submitted to PWD for approval, as specified in Section 9.01(E).
  - \* The PWD will periodically test gravel samples throughout the construction season, both in the field and at the vendor's plant.
  - \* A list of approved vendors is available on our PWD website.
- \* **We were very disappointed in repeated failures of many of the suppliers to meet the City's Recycled Gravel mix specifications. Some of the failures were major.**
- \* After last year's test results we expect every gravel supplier to be fully on board with the mix design and not have multiple failures again in 2016.
- \* Failure to adhere to the City's specs will result in that supplier only being allowed to provide approved processed M 1.03.11 Gravel.
- \* **The City, depending on the number and degree of failure, will temporarily suspend that supplier from providing or selling gravel to be used in backfilling utility excavations city-wide.**

# Concrete Requirements

- \* Concrete shall be air entrained, 4000 psi, and three-quarter ( $\frac{3}{4}$ ) inch maximum size aggregate with 660 lbs of cement per cubic yard of concrete. Entrained air shall be between 5.5% and 7.5% with a slump not to exceed four-and-one ( $4\frac{1}{2}$ ) half inches. ASTM C150 Type 11 cement shall be used. The use of mineral additives or supplements such as Ground Granulated Blast Furnace Slag, Fly Ash, Silica Fume or Micro Silica is prohibited. Normal weight aggregate shall conform to ASTM C33, containing no deleterious substances, which cause surface spalling. The Permittee must certify that no alkali reactivity is produced with the proposed aggregate-cement combinations when tested in accordance with ASTM C227.
  - \* All concrete shall be produced in accordance with the approved mix designs. The Permittee shall comply with ACI 304 and 309 as herein specified.
  - \* The Permittee shall be allowed to add water for slump adjustment, but is required to adhere to the standards of ASTM C94. This standard allows for slump adjustment on site if the truck arrives with a concrete slump less than four-and-one-half ( $4\frac{1}{2}$ ) inches. This shall only be allowed if the following conditions are satisfied:
    - \* The water addition shall not increase the water cement ratio above the maximum permitted by the specification.
    - \* The water shall be added to the entire batch, not in the middle or end of the batch.
    - \* Water addition is not allowed to by-pass the  $1\frac{1}{2}$  hour or 300 revolution criteria.
    - \* Water shall be added into the batch at the head section of the drum or by injection into the head and discharge section of the drum.
    - \* Water added requires an additional 30 revolutions at mixing speed.
    - \* The driver's delivery ticket shall document any water withheld at the batching plant.

# Concrete Testing: Ready Mix

- \* All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- \* Once approved you will be allowed to sell and provide concrete in the City of Boston.
  - \* A list of approved vendors is available on the PWD website.
- \* The City will periodically test your material in the field or at your plant.
- \* The good news is that all of the suppliers in 2015 were approved and tested consistently throughout the construction season.
- \* Thank you for supplying the City of Boston with the concrete material we need to restore our sidewalks.

# Concrete Testing: Mobile Mixers

- \* All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- \* All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- \* The City may require crews to meet with Briggs Engineering and/or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- \* Once approved you will be allowed to sell and provide concrete in the City of Boston.
  - \* A list of approved vendors is available on the PWD website.
- \* Your company must never tamper with the job mix formula in the field.
  - \* Need job mix formula with slip on work site at all times.
- \* The City will periodically test your material in the field.

# Sidewalk Access During Construction

- \* When working on a public sidewalk, or along the curb in the roadway, it is important for the crew to always maintain a safe, traversable pedestrian path around the work site.
  - \* The BTD may require, in some instances, that a safe and compliant temporary path of travel be established around the work zone.
- \* In most instances, working in the sidewalks in Boston means reducing the path of travel to less than the ADA required four foot diameter, and therefore will result in the crew temporarily closing access.
- \* When a crew must close access to a sidewalk they must notify all pedestrians that the sidewalk is closed by placing “Sidewalk Closed” signs at the closest pedestrian access ramps at either end of the sidewalk being worked on.
  - \* Sidewalk Closed signs must only be placed where there is both a crosswalk and a corresponding pedestrian access ramp across the street allowing individuals requiring mobility assistance to safely, and successfully cross.
  - \* If there are no reciprocating ramps across the street from the closed sidewalk the crew must locate the safest accessible route and direct pedestrians along that path.

# Impact of Construction

- \* Your construction work has a real and significant impact on the residents and commuters of Boston.
- \* The Traffic Management Plan approved by BTD is designed to reduce the inconvenience of construction work to the public.
- \* Personnel should try and visualize themselves from the perspective of the residents and commuters.
  - \* How would I feel if I was driving through this work site?
  - \* What would I think if I was trying to navigate around this work zone?
    - \* **This is especially important for persons needing mobility assistance such as a walker, white cane, or wheelchair.**
- \* Your supervisors and crews must keep the public in mind, and how their work is affecting them, when occupying and excavating the public way. It will make you think differently.
- \* Safety is paramount, both to your crew and to the public.



# Remove Signs After Work is Completed

- \* The Public Works

Department received many calls in 2015 about signs being left up on streets long after the work was completed.

- \* Your crews must remove “No Standing” signs immediately upon finishing your work.

- \* Remember to remove your “Steel Plate Ahead” and “Uneven Surface” signs as well.

# Must Pave: 5 Year Capital Program

- \* The PWD has put together a list of Arterial Streets that will require resurfacing in the next 5 years.
- \* COBUCS will begin indicating when these particular location are scheduled to be paved by including the year after the program acronym (ARP, CRP, RECON).
- \* Your company must coordinate to complete all capital projects and service connections prior to the year indicated for paving.

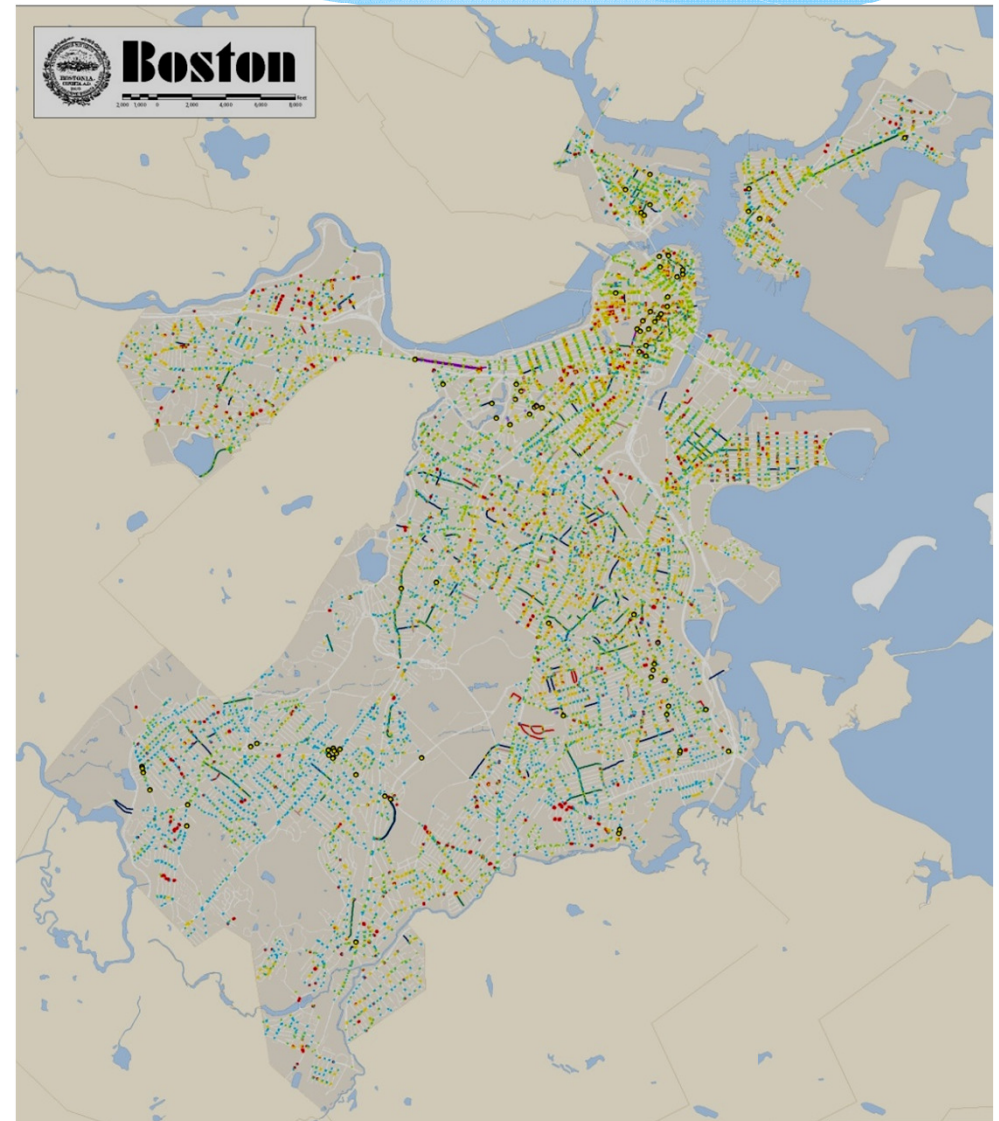
# Boston Utility Worksites

During the 2015 Construction Season there were an average of **114** active worksites and over **264** plates daily.

- Excavating
- Sidewalks
- Pipe/Conduit Installation
- Backfilling
- Plating
- Paving

Between 2012 and 2015, approximately **5,690** excavation permits were issued annually.

- (Permit activation average not including extensions)



# Reasons for Street Opening Cuts

1. Age of Utility Infrastructure
  2. Geography
  3. Changing Population (New Services and Upgrades)
  4. Technological Advancements
- \* These four independent factors lead to continuous street excavation work throughout the City of Boston.
  - \* **The bottom line is that the City of Boston is one of the busiest cities in the United States when it comes to utility service and repair work.**

# Doing Your Part

- \* Since 2012 the City has categorized the types of roadway excavation work you perform in the City
  - \* **New Conduit and/or Main 65.9%**
  - \* Service 16.2%
  - \* Maintenance 9.1%
  - \* Emergency 8.9%
- \* In the last 6 years, through mutual coordination, utilities have increased their capital budget to bridge the gap between annual City paving, and old main replacement.
- \* The City appreciates your cooperation in the upgrade of your aging infrastructure (conduits, mains, etc.)
- \* Upgrading aging infrastructure improves the quality of life for the residents and is beneficial for street preservation (no emergency cuts on new streets)

# Coordination is a Must

- \* The constant construction can be extremely frustrating to City officials who are responsible for planning, resurfacing, and reconstruction projects in the City.
- \* The ability to maintain capital street improvement programs is severely compromised by the frequency of utility construction.
- \* The City's pavement structure is weakened with every utility excavation.

Since 2012 there have been over **22,750** excavation permits activated.

# City of Boston and Utility Capital Improvement

- \* City: Capital Programs
- \* Utility Companies: Upgrades, Service Request, Emergency Repairs
- \* Private Contractors: Residential/Business
  - \* Utility and Contractor work occurs throughout Boston.
  - \* The City wants to pave the streets that are in need of repair.
  - \* PWD needs to be sure that the streets paved aren't cut into for at least 5 years.



# Eliminate Cuts in New Streets

- \* **One of Mayor Walsh's goals is to eliminate utility cuts into Guaranteed Streets.**
- \* When a recently paved street becomes littered with utility cuts, it gives the appearance of apathy to the general public regarding coordination. This is obviously unacceptable to the Public Works Department.
- \* COBUCS Reports allows you to see the City's program for the year. In addition it will be on our website.
- \* **Digging into new streets will not be tolerated!**



# Truly Cleared?

- \* The goal of the Public Works Department is to improve coordination to the point where each newly paved streets lives to the full extent of its intended lifespan without becoming plagued by utility construction cuts which jeopardize the infrastructure of the City roadways.
  - \* Resurfaced streets should remain undisturbed for at least 5 years
  - \* Reconstructed streets should remain undisturbed for at least 10 years
- \* City recommends identification of trouble mains/conduits for full replacement before any City resurfacing project takes place.

# COBUCS

- \* City developed an online coordination tool in 2009 called the City of Boston Utility Coordination System
- \* All entities seeking excavation permits must enter all of their proposed work into COBUCS
  - \* **Over 10,000 conflicts have been coordinated. That's 10,000 fewer potential Guaranteed Street cuts!!!**
  - \* It is the City's expectation that all utilities, at a minimum, enter their two-year capital plans for work.
    - \* COBUCS checks all entered work against Guaranteed Street List to determine if the entered data lies on, or intersects, a Guaranteed Street.
    - \* COBUCS checks all entered work against all City programs in order to determine if the entered data lies on, or intersects, a street proposed for a City of Boston resurfacing or reconstruction program.

**COBUCS Address:** <https://pwdapps.cityofboston.gov/cobucs/>



# Using COBUCS / Capital Plans

- \* Absolutely **NO PERMITS** shall be issued by the Boston Public Works Permit Branch until that Permittee's proposed work has been entered into the COBUCS program.
- \* The proposed **start date** (also called the "Reserve Date") must always be on the day you become **aware of the project!**
- \* The PWD recommends that you extend your proposed **completion date** to the end of the Construction Season, regardless of your actual planned completion date.
  - \* This allows the City to coordinate with you more efficiently.
  - \* **Once the reservation date expires your entry is no longer being coordinated and could potentially end up with a needless street cut on a Guaranteed Street.**
- \* Once work begins you must update the status from "Proposed" to "In Progress."
- \* Once the work is completed you must change the status to "Complete" and enter in a completion date.
  - \* **If you do not follow these procedures your permits may be placed on hold until all entries are accurately updated.**

Progress: ▼ PWD Completed: Ref: Submit

Street	From	Hi	Type	Begin	End	Progress
MATFIELD ST	DORCHESTER	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [4]
ST STEPHEN ST	MASSACHUSETTS	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
GREENWICH PK	COLUMBUS AV	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
APPLETON ST	TREMONT ST	70	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
EAST FIFTH ST	N ST	826	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [8]
COMMERCIAL ST BP N	CHARTER ST	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Cleared

**All entities are required to update the status of their programs on a daily basis! (In Progress, Completed, etc.)**

# COBUCS Conflict Notification Protocol

## (Must be emailed as soon as conflict is found in COBUCS)

PERMITS WILL BE HELD IF NO EMAIL IS SUBMITTED

- \* When you are in conflict with any City of Boston you must provide the following details:
  - \* What is the type of work? \_\_\_\_\_ (service, maintenance, capital improvement = new mains, conduits, etc.)
  - \* What is the approximate start date? \_\_\_\_\_
  - \* What is the approximate end date? \_\_\_\_\_
  - \* Do you plan on any other work within the proposed paving limits?

NOTE: If your work is being done for a new building development, or in preparation for a demolition, please indicate so in the email.

- \* The engineers in charge of the paving programs must be included in the conflict email so that they can comment at any time. The COBUCS Conflict will not be released without a response from the Engineers in charge of that program. This could include coordination details.
- \* We prefer that conflict emails contain a Print Screen (snapshot of the screen image) of the conflict. If you need instructions on how to create a Print Screen image of your conflict please email [Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov) and he will provide you a walk-through.



# COBUCS Reports

- \* COBUCS offers three reports to be reviewed to better aid your company.
  - \* The Guaranteed Street List
  - \* City of Boston's Capital Plans
  - \* Your Company's Capital Plans
    - \* To view a report, select the Reports icon on the COBUCS starting menu

# Clearance Sign-Off

- \* All streets that will be resurfaced or reconstructed in 2016 will have been officially cleared and signed off on by the 20 major utility companies and City agencies.
- \* Every private contractor outside of the major 20 who performs roadway excavation work in the City of Boston has had access to all proposed streets, and the opportunity to contact the City for possible deferment.

## The Bottom Line...

- \* The City's expectations are that all streets to be resurfaced or reconstructed in 2016 are free of any future utility planned or repair work for a minimum of 5 years.
- \* Your company was given every opportunity to defer City program streets throughout the clearance process.
- \* The cost of digging into a new street will be severe. It will range from, at a minimum, a curb to curb overlay fee, to the possibility of denial of a work permit for that street.

# Major Project Notification Procedures

- \* Utility major projects take months, or even years, to plan. For that reason it should not be a burden for any utility company to provide adequate advanced notice to the surrounding affected residents and businesses regarding these projects.
- \* All Permittees are required to contact the Office of Neighborhood Services (ONS) **30** days in advance of major work.
  - \* ONS will determine whether or not a Community meeting will be necessary before the project is approved.
- \* All Permittees must contact the BTD a minimum of **30** days in advance of major work (as determined by BTD).
  - \* Permittees must have their Traffic Management Plan in place for review and approval before obtaining permission to work by the PWD.

# Letters to Constituents for Major Work

- \* All Permittees will send letters to all residents two weeks in advance of the start of work.
  - \* **PDF Emails must be sent to designated City Personnel on the day the letters are distributed.**
  - \* Letters must explain the reason for the work, the estimated start & complete date, name of the contractor, and 24 hour contact information including the name of Permittee Supervisor, etc.
- \* All utility companies and private contractors must take into consideration the impact the construction has on the residents of the affected street, and try to the best of their ability to coordinate & cooperate with the neighborhood.

# Leafleting & Posting Procedures

## New Mains, Conduit Installation, Major Work

- \* As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- \* Using the new posting template for BTD No Standing signs, posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- \* On major projects, only post where your crews will be actively working within the next 48 hours.
  - \* No longer will you be able to post a block or two at a time when you know the work won't take place for a week or longer
- \* Crews must move the BTD No Standing signs down the road in advance of the progressing active work.

# Major Project Coordination

## Night & Weekend Work

- \* Must meet with CIU before commencing work to review:
  - **Scope of Work**
  - **Dates of Work**
  - **Contact Information**
- \* Asphalt plants may not be open during off-hours and crews may not have the approved asphalt material on hand.
  - \* Hot mix asphalt tends to cool down in the time between when it was picked up at the plant to when it will be used for the night work, resulting in poor a paving job.
- \* **Will result in mandatory use of a hot-box after hours, unless otherwise authorized by PWD.**



# Leafleting & Posting Procedures

## Service & Maintenance

- \* As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- \* Posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- \* Crews must remove signs after work is completed.

# Leafleting & Posting Complaints

- \* The City has received numerous complaints to its Mayors CRM system regarding inadequate postings:
  - \* Missing dates or Per Numbers
  - \* Illegible signs
  - \* Posting beyond work limits
  - \* No crews showing up on posted dates
    - \* Extending dates
    - \* Constituents cooperate by not parking on the street.
    - \* Frustration grows when crews don't show up on the dates posted.
- \* We know the project is ultimately good for the Neighborhood you're working in, but it is an inconvenience and accurate posting will go a long way in making the job smoother for everybody.

# Damaged or Exposed Street Lighting Conduit Protocol

**Any contractor who accidentally strikes or damages a street lighting conduit must immediately contact the Street Lighting Section.**

- \* Monday - Friday, 7:00am until Midnight please call 617-635-7501.
- \* Monday - Friday, 12:00am until 7:00am and on weekends please call 617-635-4500.
- \* You must not close the excavation until an inspector has reviewed the conduit. An Inspector will be sent to the site to identify the line that was damaged.
- \* Minor damage shall be repaired by the lighting section.
- \* Major damage shall be repaired by the contractor. The contractor you hire to repair the City's street lighting conduit needs to have experience in electrical conduit work.
- \* The conduit must be inspected by the Street Lighting Section prior to backfilling at no cost to the City of Boston.

- \* **Any damage that is discovered by the street lighting section after the Contractor has left the location shall be the responsibility of that Contractor for repair.**
  - \* The Street Lighting Section shall bill the appropriate Contractor for all work necessary for the repair and/or replacement of conduit and cables.
- \* It is to the Contractors benefit to notify the Street Lighting Section of any damage.
  - \* Damage to conduits and cables could potentially cause stray voltage which could harm the General Public.
- \* We will thoroughly investigate any incident; and if a Contractor is responsible for the stray voltage, they will be held liable for any and all damage (property as well as personal) sustained by creating this situation.
- \* Any Permittee who strikes or damages a street lighting conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.

# Damaged or Exposed Conduit Protocol

- \* Any contractor who strikes or damages BTM Traffic Signal Conduit must first immediately contact The Boston Transportation Department at:
  - \* 617-635-4430 (Mon-Fri , 6AM-10PM; Sat 9AM-5PM)
  - \* 617-635-4500 (Weekends, Holidays, and Mon-Fri , 10PM-6AM)
- \* The excavation must not be closed until a BTM inspector has assessed the situation and determined which line/conduit was damaged.
- \* Damage that has not been reported to BTM or has been discovered by BTM after the contractor has left the location shall be the responsibility of that contractor to repair.
- \* Damage to BTM conduit and/or cables must be repaired by a BTM approved traffic signal contractor and the work must comply with BTM specifications.

- \* Any damage that is discovered by the BTD after the Contractor has left the location shall be the responsibility of that Contractor for repair.
- \* Any utility infrastructure that is struck or damaged that directly affects BTD conduit(s) (i.e. Damage to NSTAR electric conduits feeding traffic signal cabinets) must be reported to both NSTAR and BTD.
- \* To avoid striking BTD conduits please contact BTD to request plans showing the approximate location of BTD owned conduits before performing any excavation near or at a signalized intersection.
- \* **Any Permittee who strikes or damages a BTD conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.**



## CONTACT PROTOCOL WHEN EXPOSING OR DAMAGING STREET LIGHTING/BOSTON TRANSPORTATION AND NSTAR ELECTRIC INFRASTRUCTURE

### Reporting Exposed or Damaged Street Lighting Conduit

- Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.
- Monday - Friday, 12:00am until 7:00am, and weekends and holidays, please immediately call **617-635-4500**.

### Reporting that the Repair to the Street Lighting Conduit is Complete

- Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.

### Reporting Exposed or Damaged Traffic Conduit to BTB

- Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.
- Monday - Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call **617-635-4500**.

### Reporting that the Repair to the BTB Conduit is Complete

- Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.

### Reporting Exposed or Damaged NSTAR Electric Conduit

- 24 hours a day, 7 days a week please immediately call **1-800-592-2000**.

### Reporting Exposed or Damaged NSTAR Electric Conduit where you know either BTB or Street Lighting has been affected as well

- NSTAR Electric: 24 hours a day, 7 days a week please immediately call **1-800-592-2000**.
- Street Lighting: Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.
- Street Lighting: Monday - Friday, 12:00am until 7:00am, and weekends and holidays, please immediately call **617-635-4500**.
- BTB: Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- BTB: Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.
- BTB: Monday - Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call **617-635-4500**.

# Protocol when Construction Damages or Exposes Electrical Conduit

You must never leave your work zone or backfill the excavation until a representative from Street Lighting, BTB, or NSTAR Electric has arrived on site to assess any possible damage done to the infrastructure.



# Be Mindful of Daily City Services

- \* The City understands that your company has a job to perform, however throughout the entire project the crew should be mindful of the public.
  - \* Be aware of Trash and Recycling pickup schedules
  - \* Be aware of Street Sweeping efforts
  - \* Work with moving trucks and post delivery
- \* At all times crews should keep the street as fully functional as possible.

# Know the Schedule

- \* It is your responsibility to be aware of scheduled trash and recycling pickup days for the street you are working on.
- \* Your crews must provide access for trash and recycling pickup
- \* If your work prevents pickup, your crews must bring the trash and recycling to the nearest accessible curb for pickup
- \* Pickup schedules can be found on the City's web page:  
<http://www.cityofboston.gov/myneighborhood/>
- \* Preventing access to trash and recycling pickup is a health and safety concern.

# Committed to Superior Construction

## CIU - Construction Inspection Unit

A specialized unit created in 2003 to increase oversight personnel to combat poor workmanship.

### Mayor Walsh Demands Perfection!

- \* BWSC CSO initiative
- \* Electrical infrastructure upgrade
- \* Telecommunication
- \* Growth in Boston real estate markets
- \* Angle of Influence work
- \* **OLD INFRASTRUCTURE**
- \* CIU Assists regular BPWD workforce
- \* **Changing expectation of construction in Boston**



*Education*



*Inspection*



*Documentation*



*Evaluation*



*Enforcement*

# Boston's Street Opening Management System

## Utilize the Permitting and Inspectional program to Store and Evaluate Permittee Data

- ✓ Tracking Permittee Work & Violations
- ✓ Develop Report Card for Contractors
- ✓ Report Card Helps Educate and Enforce Rule & Specs
- ✓ Benefiting Utilities

## Ensure a “Top-Down” Support Structure

- ✓ Starts with Mayor Walsh and Commissioner Dennehy of the Public Works Department
- ✓ City Annual Report

construction inspection unit							
Noncompliance Rating Summary							
KeySpan							
7/1/2008 to 7/31/2008							
Inspection Item	# OF INSPECTIONS	# OF VIOLATIONS	Period Company Rating	Period City Wide Rating	Year-To-Date Company Rating	Year-To-Date City Wide Rating	
1. Core at Permit Present?	459	9	1.84%	1.34%	0.73%	0.84%	
2. Adding to Permit Restrictions?	452	3	0.62%	0.55%	0.18%	0.39%	
3. Safe Work Zone?	476	0	0.00%	0.00%	0.04%	0.16%	
4. Suitable Per used Guard Material?	0	0	NO INSP	0.00%	0.00%	0.00%	
5. Suitable New Guard Material?	142	0	0.00%	0.00%	0.00%	0.07%	
6. Compacted 1/2" Minimum Lift?	150	0	0.00%	0.25%	0.00%	0.07%	
7. Controlled Desc./FBI/CDP?	0	0	NO INSP	0.00%		0.00%	
8. Opening Secured?	609	4	0.66%	1.11%	1.35%	1.15%	
9. Edges Chained/Divided?	187	0	0.00%	0.25%	0.00%	0.09%	
10. Two 1-1/2" Lifts of Hot Mix Asphalt?	77	0	0.00%	0.00%	0.00%	0.00%	
11. Roadway Satisfactorily Complete?	194	10	5.15%	5.68%	1.74%	1.88%	
12. Temp Side Walk Complete?	9	0	0.00%	0.00%	0.00%	0.33%	
13. Permanent Sidewalk Complete?	3	0	0.00%	3.45%	0.00%	1.16%	

My Hansen		Lookup Applications		Lookup Inspections	
<input type="text"/> SEARCH <input type="text"/> ACTION <input type="text"/> MAP DRAWER <input type="text"/> PRINT					
A/P #	<input type="text"/>		Inspection #	<input type="text"/>	
Application Type	<input type="text"/>		Inspection Type	<input type="text"/>	
Application Priority	<input type="text"/>		Assigned To	<input type="text"/>	
A/P Name	<input type="text"/>		Group Name	<input type="text"/>	
Call Date	<input type="text"/>	To <input type="text"/>	Resulted Date	<input type="text"/>	To <input type="text"/>
Scheduled Date	<input type="text"/>	To <input type="text"/>	<input type="checkbox"/> Uninspected Only		
Started Date	<input type="text"/>	To <input type="text"/>			
Completed Date	<input type="text"/>	To <input type="text"/>			
Address	Number <input type="text"/> Pre Dir <input type="text"/> Street Name <input type="text"/> Suffix <input type="text"/> Post Dir <input type="text"/> Subdesignator <input type="text"/>				
	City, State, ZIP <input type="text"/>				

# PWD's Responsibility

Our  
Goals



**Ensure Public Safety  
Throughout Construction**

Minimize  
Inconvenience To  
Public

Protect and  
Preserve City  
Infrastructure

# Permittee's Responsibility

**Adhering to  
PWD Rules &  
Specs**



**Following BTD  
Traffic Plan &  
Work Hours**



**Preserving the  
Quality & Ensuring  
Safety on our  
Right-Of-Ways**

# Professionalism

- \* We all chose this profession.
- \* Our work affects the daily lives of everyone in Boston.
- \* The CIU may need to communicate to you that you have not followed the City's rules from time to time.
- \* Nobody likes to be told that they are not doing a good job; however, that's when professionalism must come to the forefront.
- \* We cannot have pushback regarding violations of the City's rules, especially when it comes to the repair of defective/failed work. Our timelines were established to make sure that defective work does not linger.
- \* Our rules stipulate that if you do not repair defective work in the time established we have the right to hold up new permit requests.



# “It’s Construction”

The City acknowledges that construction is difficult and complicated.

Construction is a chain-of-command.

Breakdowns in communication can happen.

However, the CIU will not accept blatant disregard, cutting corners, indifference, or apathy as an excuse for not following the Rules and Specification and state: “It’s Construction”.

# Utility Construction



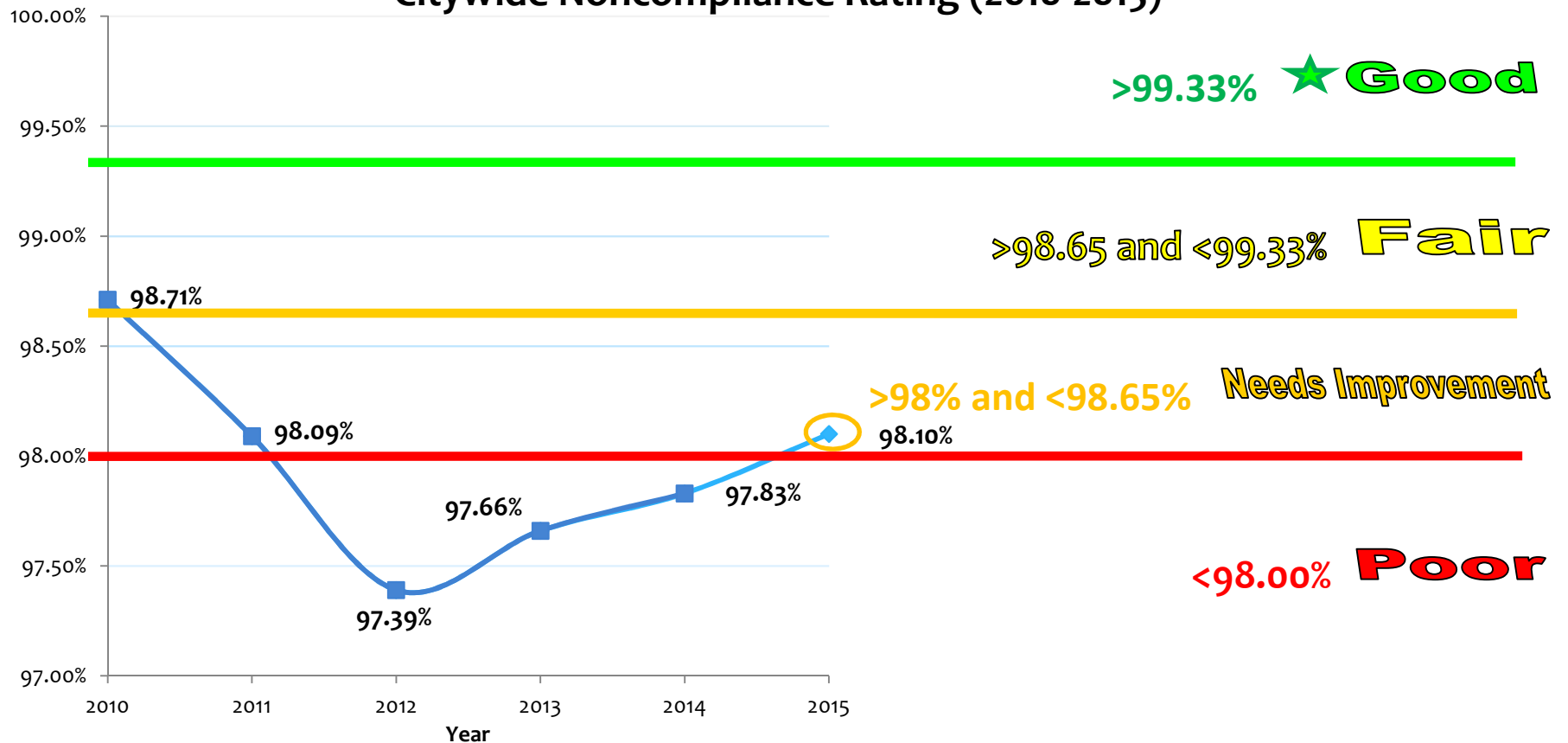
# Inventory

- \* Before the start of the Construction season you must check all your equipment to be sure they are in working order. None of us want to have your work stopped suddenly due to equipment breakdown.
- \* Signage
  - \* All Permittees must have ALL appropriate signage for utility construction work. Lack of proper signage will result in immediate shutdown.
  - \* All signage must have lettering that is clearly visible. Damaged signs should be replaced. At no time should a sign be illegible to the public.
  - \* At a minimum, all companies should own at least two ID signs for every permitted job site they intend to have active at the same time.
  - \* All companies must have the proper Sidewalk Closed signs for each job.
- \* Delineation of work site
  - \* Cones, tape, barrels, interlocking barricades, etc.

# Improvement Trend – Keep It Up!

Overall compliance still can be improved, particularly in regard to securing your openings and compaction.

Citywide Noncompliance Rating (2010-2015)



# Overall Significant Improvement!

Over the past three years there has been a 10% improvement in the final paving product!

<b>Non Compliance Decline</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Overall</b>	98.71%	98.09%	97.39%	97.66%	97.83%	98.10%
Opening Secured	98.81%	97.42%	97.47%	97.48%	98.36%	97.35%
Final Paving Product	93.19%	86.84%	86.29%	91.19%	93.52%	96.95%

**The Overall Compliance rating is the best  
that it has been in 5 years!**



# Steps Taken to Improve your Rating

The City will be strictly employing the following procedures

1. PWD enforces a **0 tolerance** policy on all violations.
2. Work zones will be shut down and a meeting scheduled in City Hall to discuss, **no matter what the violation.**
3. Emergency Locations in Violation may delay Standard Permit issuance.
4. Unacceptable patch/trench repairs; pavement markings or loop detectors, etc. not restored within 7-13 days; or sidewalks not permanently repaired within 60 days **will result in a suspension of new permits.**
5. Multiple violations, or the poor Non Compliance rating of a contractor may result in the **suspension of their ability to work** in the City for a to be determined time period.
6. A single egregious violation, or hostile behavior by a contractor may result in the **suspension of their ability to work** in the City for a to be determined time period.

# Enforcement

- \* **Zero Tolerance on Individual Work Zone Violations**

- \* Immediate jobsite shutdown/meeting at City Hall

- \* **The City cannot allow mediocre work to continue marring the public ways without repercussion.**

- \* Overall compliance rating < 98.00% - managers called for a meeting to discuss the crew's construction practices and how to improve.
  - \* No improvement will result in a citywide non-emergency shutdown of permits and a meeting will be scheduled in City Hall.
  - \* Continued lack of improvement shall result in another shutdown and require that the highest representatives of the company meet with Commissioner Dennehy and the Mayor's office to discuss overall construction practices.
  - \* Elevated individual items (e.g. Plates) will result in similar shutdown procedures.
  - \* The Permittee shall be held accountable for any actions performed by its personnel. If the personnel of a Permittee is cited for three shutdown meetings for the same inspection item, the Permittee will bear equal responsibility.

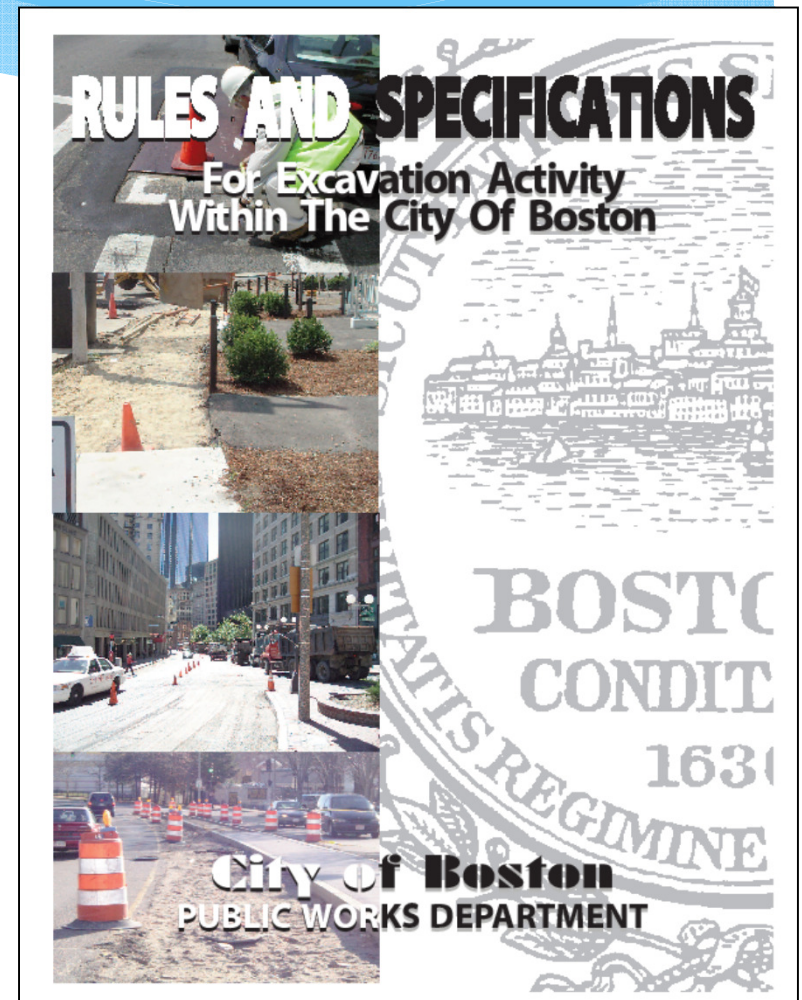
**Mayor Walsh takes Public Safety Seriously!**



# Rules & Specifications for Excavation Activity within the City of Boston

[www.CityofBoston.gov/PublicWorks/](http://www.CityofBoston.gov/PublicWorks/)

- \* Created with input from utilities & various agencies
- \* In the process of being updated.
- \* Newest version will be completed by the end of spring.
- \* Edits and changes include Utility Repair Tags, Hansen, patch and sidewalk repair, edge stone, casting responsibility, etc.



# Item 1 – Permitting & Job Start

- \* Current PWD Permit,
- \* BTM Traffic Plan
- \* Jackie's Law Permit
- \* Competent Person
- \* Submit the online Call-In Form at least 24hrs prior to:
  - \* Start
  - \* Backfill
  - \* Pave
  - \* Completion
  - \* **Sidewalk Permanent Repair**
    - \* If batching in field, may require on site testing
  - \* Emergencies within 1 hour of work

**MUST BE ON-SITE AT ALL TIMES!**

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**

**INSPECTOR'S REPORT**

☐ Normal CU Inspection ☐ Other Inspection (please specify inspection, BTM, BMM, etc.)

☐ Inspection items not performed

Size of Cut on Panel: \_\_\_\_\_

Roadway or Sidewalk? \_\_\_\_\_

Permit #: \_\_\_\_\_ Patch / Trench or Patch / Trench \_\_\_\_\_ Depth? \_\_\_\_\_

Address: \_\_\_\_\_ Contractor: \_\_\_\_\_

Street: \_\_\_\_\_ Foreman: \_\_\_\_\_ Phone: \_\_\_\_\_

Neighborhood: \_\_\_\_\_ Time From: \_\_\_\_\_ To: \_\_\_\_\_ Total Hours: \_\_\_\_\_

Date: \_\_\_\_\_ Weather/Temp: \_\_\_\_\_

1. Current Permit Present? ☐ YES ☐ NO

2. Abiding to Permit Restrictions? ☐ YES ☐ NO

3. Safe Work Zone? ☐ YES ☐ NO

4. Suitable Paved or Gravel Material? ☐ YES ☐ NO

Notes: \_\_\_\_\_

Violation: \_\_\_\_\_

PHOTO? YES NO SHUTDOWN

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

4:00 PM

---

**Public Works Department**  
**Boston Transportation Department**

One City Hall Square Room 713 Boston, MA 02201  
 Telephone: 617.631.4010, 617.631.4009, 617.631.4011

**Excavation Permit - Extension**

Permit #: EXCA-10204 Anticipated Start Date: 09/01/2012 Anticipated End: 09/01/2012

Work Type: Capital Anticipated Duration: 30 Hours

Division: West Roxbury/Roslindale Expires: 09/30/2012

Applicant: BOSTON PUBLIC WORKS DEPT Extension Fees: \$0.00

Location: SA-108 HAMMOND ST Extension Fees: \$0.00

Location Comments: Hammond from Shamrock to Tremont

PWD Description Of Work: Capital Improvement Project (Public Works - 11-32) Street Lighting & Traffic Signal EXTENSION

BTM Approval Date: 04/05/2012

BTM Description Of Work: Notes: Sidewalk Construction - Street Lights and Curb Reset

Other: See Notes

All Work To Be Performed: 7:00AM TO 4:00PM No Work To Be Performed: \_\_\_\_\_

Exceptions: \_\_\_\_\_

Special Requirements: Notes: \_\_\_\_\_

Proximity and Sidewalk to be Completely Clear and Available at the End of Each Workday

Temporary Signs Shall be Posted a Minimum 48 Hours in Advance of Occupation of Public Way

No Loud Noisy Work Saw Cutting/Grinding/Drilling After 11 P.M.

Meter Information: \_\_\_\_\_

Sign Information: \_\_\_\_\_

Police Detail: \_\_\_\_\_

Area A: \_\_\_\_\_ Area B: \_\_\_\_\_

Police Phone # \_\_\_\_\_

Page 1 of 2

# Emergency Permits

- \* Used by major utilities for Emergency Situations
- \* Purchased in blocks from PWD permit office
- \* Must be called in within 1 hour of commencement of work
- \* Must apply for EXCA permit after 24hrs of work
- \* Delay of EXCA permit request unacceptable
- \* Delay of job requires reason in writing
- \* **Use of an Emergency permit for non-emergency work will result in an automatic shutdown of all new permit requests.**

# Neighborhood Permitting

- \* Major Utility Companies have had neighborhood permits for permanent sidewalk restoration, unacceptable patch/trench repair, and cast iron infrastructure repairs for the past year.
- \* **A proven success in expediting repairs and streamlining the permit process!**
- \* Individual Permits required for Downtown, Chinatown, North End, Beacon Hill and on Main Arterials in South End and Back Bay.
- \* BTD determines the day/time restrictions.
  - \* All BTD restrictions must be followed; e.g.
    - \* Major Arterials, 9:30 start
    - \* Proper police detail
    - \* TMP signs must be posted 48 hours in advance of work
    - \* Proper Site delineation
- \* Permittee must email designated BTD and PWD personnel the locations to be worked on 48 hours in advance.

# Item 2 – BTB Requirements

- \* BTB Approval Form must be on job site at all time.
- \* Traffic flow
- \* Police Detail
- \* Work Hours
- \* Stockpiling only where approved
- \* Site is leafleted 72 hours and posted at least 48 hours in advance
  - \* Do not extend posting beyond area of active construction
- \* All posting dates are accurate with dates and permit information clearly visible
- \* Utility Repair Tags are installed in every asphalt patch, as required.
  - \* If there are multiple excavations, each excavation will require a tag.

**CITY of BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIU Inspection ☐ Other Inspection \_\_\_\_\_  
 Inspection items not performed \_\_\_\_\_  
 please specify completed, RTB, RMC, etc.  
 Size of Cut on Permit \_\_\_\_\_

**Roadway or Sidewalk?**  
 Patch / Trench or Patch / Trench \_\_\_\_\_ Depth? \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Notes	Violation
1. Current Permit Reasons?	YES NO
2. Abiding to Permit Restrictions?	YES NO
3. Safe Work Zone?	YES NO
4. Suitable Reused Gravel Material?	YES NO
5. Suitable New Gravel Material?	YES NO
6. Compacted in 8" Maximum Lifts?	YES NO
7. Controlled Density Fill (CDF)?	YES NO
8. Opening Secured?	YES NO
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO
10. Final Paving Requirements?	YES NO
11. Roadway Satisfactorily Complete?	YES NO
12. Temp Sidewalk Accessible?	YES NO
13. Permanent Sidewalk Complete?	YES NO
14. Pedestrian Ramp Compliant?	YES NO
15. Loop Detectors / Pavement Markings?	YES NO
Public Safety Issues?	YES NO
Violation Delivered?	YES NO
Utility Rep. Consented?	YES NO

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM



# Leafleting & Posting Procedures

## Service & Maintenance

- \* As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- \* Posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- \* Crews must remove signs after work is completed.

# Leafleting & Posting Complaints

- \* The City has received numerous complaints to its Mayors CRM system regarding inadequate postings:
  - \* Missing dates or Per Numbers
  - \* Illegible signs
  - \* Posting beyond work limits
  - \* No crews showing up on posted dates
    - \* Extending dates
    - \* Constituents cooperate by not parking on the street.
    - \* Frustration grows when crews don't show up on the dates posted.
- \* We know the project is ultimately good for the Neighborhood you're working in, but it is an inconvenience and accurate posting will go a long way in making the job smoother for everybody.



# 'No Standing' Signage

- \* Template will be provided to Utility Companies and Private Contractors performing major work.
- \* You'll have the ability to adjust template based on BTB permit restrictions.
- \* Any handwritten information must be **legible!**
- \* More professional, easy to understand sign.
- \* Will be better for everyone affected.



# Steel Plate Ahead Signage

- \* Plating active excavations comes with the territory.
- \* Sites are typically plated 16 hours per day which creates a major liability.
- \* **It is so important for the vehicles to be aware the of plates ahead before reaching the work zone.**
- \* Boston will be the leader on notifying the public of steel plates in use.



**Steel Plate Ahead signs will be required throughout both Construction Season and Winter Moratorium.**

# Steel Plate Ahead Specifications

- \* Retroreflective Florescent Orange (Type 4) Material
- \* Securely bracketed to pole 6' from bottom of sign to ground.
- \* Posted 200'-300' in advance of plated area.
- \* Must be placed in both directions if plates span across centerline.



# Trench Awaiting Final Top Signage

- \* **Mandatory on all projects where binder will be left down for extended period of time.**
- \* The City understands the best procedure regarding final paving of major trenches is to apply the binder course first, and then wait for the services to be installed before the final top course.
- \* By doing that, we leave the binder trench course down for extended periods of time.
- \* This has led to complaints to our mayors hotline, with the feedback being that it's either a bad job or with questions on why the trench is down.





# Remove Signs After Work is Completed

- \* The Public Works

Department received many calls in 2015 about signs being left up on streets long after the work was completed.

- \* Your crews must remove “No Standing” signs immediately upon finishing your work.

- \* Remember to remove your “Steel Plate Ahead” and “Uneven Surface” signs as well.



# Utility Repair Tags

**Remember to order your 2016 tags!**

- \* **ALL Permittees working in the City of Boston are required to install 2016 Utility Repair Tags on all asphalt patches.**
- \* Companies without Utility Repair Tags must contact the Construction Management Division of PWD to identify what their company's tag should look like for ordering.
- \* Any company found to not be installing their Utility Repair Tags, or installing them improperly, may be shut down and have a meeting scheduled in City Hall to discuss proper tag placement technique.



**Utility Repair Tags** are installed during the final lift of paving.  
**The tags must be pressed into the asphalt BEFORE compaction of the final lift commences.**

The tags shall be imbedded at zero grade tolerance, or slightly below, and must be of one piece construction.

The use of nails to secure tags is prohibited.

The color-coded Utility Repair Tags are NOT intended to identify underground utility infrastructure. The Utility Repair Tags are only to identify the Permittee who is responsible for maintaining the compliance of a temporary roadway or sidewalk patch/trench.

- \* Utility Repair Tags must be used on any temporary cold patch, silvex, or asphalt material placed.
- \* Utility Repair Tags should not be placed within 12” from any casting unless space does not allow otherwise.
- \* Utility Repair Tags should be placed away from direct wheel traffic when able.
- \* The Permittee is responsible for replacing damaged or faded identification **Utility Repair Tags** throughout the three year guarantee period of a utility patch/trench repair.
- \* The Permittees will not be responsible for maintaining their patch/trench if the excavation is interrupted by another utility, or if the location is permanently repaired.

# Utility Tag Placement Guideline

Patch/Trench Length	Tag Placement	
$X < 50'$	1 tag placed in the center of the patch	<b>ALL LATERALS EXTENDING FROM MAIN PATCH OR TRENCH MUST HAVE THEIR OWN TAG IN THE CENTER OF THE LATERAL!</b>
$50' \leq X \leq 100'$	1 tag placed at each end of the patch/trench approximately 12" from the edge	
$100' \leq X \leq 400'$	1 tag placed in the beginning, center, and end of the trench, with the beginning and end tags approximately 12" from the edge. An additional tag must be placed at every intersecting street	
$X > 400'$	1 tag placed at the beginning and end of the trench approximately 12" from the edge, and at every 200 linear foot intervals. An additional tag must be placed at every intersecting street	

# Item 3 – Condition of Work Zone

Be sure to keep a safe, clean & well defined jobsite!

- \* OSHA / ADA / AAB / Dig Safe requirements maintained at all times.
- \* Jackie's Law applicable on unattended trench excavations.
- \* Safe & Guarded Work Zone
- \* Continuous Barricades (where required)
- \* Shoring (where required)
- \* **Sidewalk Closed Signs required at closest ramps. Federal Requirement (ADA)**

**CITY OF BOSTON - PUBLIC WORKS DEPT**  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTOR'S REPORT

☐ Normal CRJ Inspection ☐ Other Inspection \_\_\_\_\_  
Inspection items not performed \_\_\_\_\_  
Size of Cut on Permit \_\_\_\_\_

PERMIT #: \_\_\_\_\_ Roadway or Sidewalk? \_\_\_\_\_  
Address: \_\_\_\_\_ Patch / Trench or Patch / Trench: \_\_\_\_\_ Depth? \_\_\_\_\_  
Contractor: \_\_\_\_\_  
Street: \_\_\_\_\_ Foreman: \_\_\_\_\_ Phone: \_\_\_\_\_  
Neighborhood: \_\_\_\_\_ Time From: \_\_\_\_\_ To: \_\_\_\_\_ Total Hours: \_\_\_\_\_  
Date: \_\_\_\_\_ Weather/Temp: \_\_\_\_\_

Day of the week, Month, A, Time	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Secured?	YES NO	<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Meet Police Requirements	YES NO	<input type="checkbox"/>

SHUTDOWN ☐



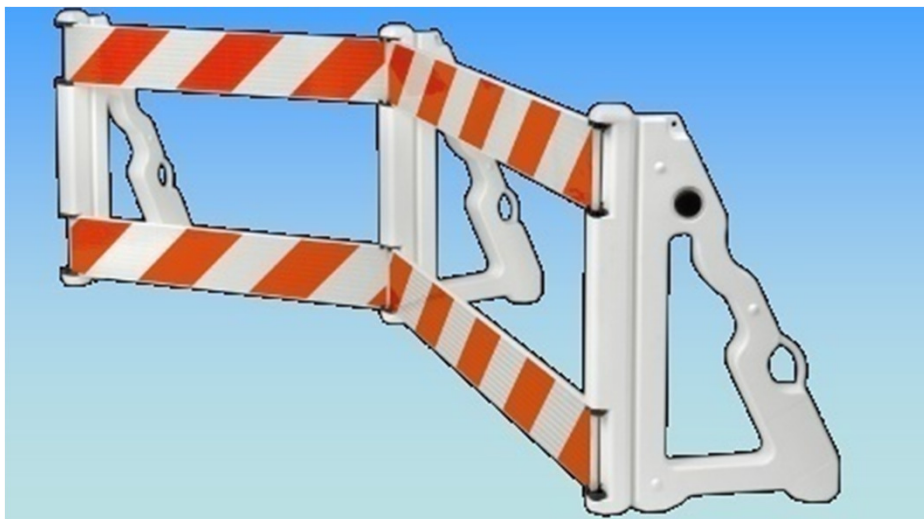
- \* Boston is densely populated. Must take care in protecting your work zones.
- \* The Permittee must surround the excavation with cones, barrels, barricades etc.
- \* The cones and barrels must be taped or roped to protect the pedestrians, workers and vehicles passing through the work zone.
- \* Continuous barricades must be used where specified by the BTB
- \* There will be no exceptions and violations for noncompliance will be issued and the job will be shut down.

# Barricades

- \* Both the PWD and the BTD have determined that certain locations require more than just tape or rope between cones to secure a work site for the protection of pedestrians and workers
- \* The BTD & the CIU have determined that certain work zones will require the use of Barricades.
  - \* Barricades are for delineation of active excavation outside of pedestrian areas sites and are not compliant for pedestrian path of travel.
- \* These barricades must adhere to OSHA specifications.
- \* The PWD enlisted the assistance of certain contractors to begin testing the use of Continuous Barricades.
  - \* Those contractors, along with BPD Detail officers, agreed that the barricades provided superior protection of the workers, motorists, and pedestrians alike.
- \* **BTD will sign off on the type of barricades to be used based upon location and traffic needs.**

# Temp Pedestrian Path of Travel

- \* Certain BTD Traffic Management Plans may required the application of temporary pedestrian paths of travel (Jersey Barriers, etc).
- \* The BTD may require an ADA compliant pedestrian barricades and channelizing devices for the visually impaired on a case by case basis.





# MUTCD STATUTES

## R302.4

Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see R104.2.4).

### R302.4.1

A continuous bottom edge shall be provided 150 mm (6 in) maximum above the ground or walkway surface.

### R302.4.2

Devices shall provide a continuous surface or upper rail at 0.9 m (3.0 ft) minimum above the ground or walkway surface. Support members shall not protrude into the alternate circulation path

# Items 1-3 – Foreman Check List

- \* Before excavation begins the Foreman must have performed the following:
  - \* Checked to be sure the current permit is valid and on site.
  - \* Made sure that all required signage has been placed properly (ID, sidewalk closed, utility ahead, etc.)
  - \* Verified that all BTD traffic regulations are being upheld, allowing traffic flow (cones, interlocking barricades, barrels, tape, etc.).
  - \* Excavation area has been secured and cordoned off.
  - \* Competent Person is on site.
  - \* Utility Repair Tag markers are on site for installation in patch/trench work.
- \* Only after each of the above requirements has been established can the work take place.

# Items 4 & 5 - Backfill Material

- \* (MHD M1.03.11) “Process Gravel for Sub-base” required, from an approved source
- \* Re-used and Recycled excavated material requires laboratory test results signed by a professional engineer that the backfill material conforms to MHD M1.03.11
  - \* The City is currently revising its position on the requirements for recycled material.
- \* Annual submission of current testing (sieve analysis & proctor)
- \* Random onsite & source verification testing
- \* Where a layer of concrete, cobblestone, granite pavers, or other supporting material exists, the Permittee shall replace with concrete prior to installation of temporary pavement.

**CITY OF BOSTON - PUBLIC WORKS DEPT.  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTORS REPORT**

☐ Normal CIR Inspection ☐ Other Inspection \_\_\_\_\_  
please specify completed, RFD, RMD, etc.

☐ Inspection item not performed ☐ Size of Cut on Permit \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Depth?** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
Time (in hours)

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_  
Day of the week, Month, A, Time

	YES	NO	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted to 8" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Acceptable?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Public Safety Issue?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Reported?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Utility Rep. Consented?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIR working hours Monday-Friday 7:30 AM - 4:00 PM



Not Acceptable!



Acceptable.



# Approved Material Sources

- \* All material used for roadway and sidewalk construction in the City of Boston must come from an approved source. Materials include:
  - \* Backfill material
  - \* Asphalt
  - \* Concrete
- \* The City will maintain an updated list of approved vendors on the Public Works website.
- \* A Permittee may request to use a vendor not listed on the City's website. The requested source will be subject to testing before approved by the City.
  - \* If approved that vendor will be added to the website.



# Item 6 – Compaction

## Critical step in street opening restoration

- \* Standard - **6" lifts** sufficient for standard equipment (jumping-jack).
- \* Control-strip required for equipment capable of greater compaction depth.
- \* Crowded trench can prohibit standard compaction.
- \* Poor compaction results in unacceptable patches/trenches.
- \* **Any Permittee work zone found to be in egregious violation of Item 6 shall be shut down.**
- \* **Trust will have been broken!**
  - \* Possibility of all active work zones being shut down (Excluding Emergency work)



CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTOR'S REPORT

☐ Normal CU Inspection ☐ Other Inspection (Specify violation, RTA, etc.)  
☐ Inspection Name not performed (Size of Cut on Panel)

PERMIT # \_\_\_\_\_ Roadway or Sidewalk? \_\_\_\_\_  
Address \_\_\_\_\_ Contractor \_\_\_\_\_  
Street \_\_\_\_\_ Foreman \_\_\_\_\_  
Neighborhood \_\_\_\_\_ Time From \_\_\_\_\_ To \_\_\_\_\_ Total Hours \_\_\_\_\_  
Date \_\_\_\_\_ Weather/Temp \_\_\_\_\_

Notes	Violation
1. Current Permit Process?	YES NO
2. Adhering to Permit Resolutions?	YES NO
3. Safe Work Zone?	YES NO
4. Suitable Reused Gravel Material?	YES NO
5. Suitable New Gravel Material?	YES NO
6. Compacted to 1" Maximum Lifts?	YES NO
7. Controlled Density Fill (CDF)?	YES NO
8. Operating Accurately?	YES NO
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO
10. Final Parking Requirements?	YES NO
11. Roadway Surroundings Complete?	YES NO

YES NO SHUTDOWN









# After-Hours Backfill & Pave

- \* Work where the backfill and paving operations are scheduled to take place on weekends or after normal working hours must have prior approval by the BPWD.
- \* If a company performs emergency work after 4:00pm during the week, or on a weekend, the City may require the location to be plated until such a time that a CIU Inspector can be assigned to witness the backfill and/or pave on their next scheduled work day.
- \* The CIU reserves the right to require any Permittee to perform compaction testing (Nuclear Density) at the cost of the Permittee.

## Settlement of 2 or More Inches

- \* Properly backfilling your excavation is the most important step in construction.
- \* Failure to compact gravel to specifications results in uneven and settled patches.
- \* Every bad patch that needs to be repaired due to poor construction practices is money out of your company's pocket. Do work right the first time for your own benefit!

# Settlement of 2 or More Inches

- \* **Roadway patches and trenches that have settled 2 or more inches must be given the highest priority for repair.**
- \* As a condition of receiving a permit your company has pledged to the City that you will repair any locations found to be unacceptable to the Rules & Specifications.
- \* This means providing the resources to meet any backlog of repairs as well as newly identified unacceptable locations.
- \* Any roadway patch identified as settling 2" or more must be repaired by your company prior to the City's patch repair program. This includes placing new gravel to prepare for permanent restoration.

# Improper Compaction is the Leading Cause to Patch Failure



# Reasons for Settlement >2”

- \* Material did not meet City specifications
- \* Material was too dry at the time of backfill
- \* Material was frozen at the time of backfill
- \* Material was too wet at the time of backfill
- \* Backfilling happened in inclement weather
- \* Improper backfill compaction equipment was used
- \* Backfilling in lifts greater than 6 inches with standard equipment
- \* Backfilling in lifts greater than 2 feet with approved equipment
- \* Too few passes with approved compaction equipment
- \* **All of these reasons are unacceptable and can be avoided**

## Item 6 – Foreman Check List

- \* Before backfilling takes place the Foreman must have performed the following:
  - \* Is the gravel being supplied from an approved source?
    - \* Reject any material that is frozen, too wet, too dry, or otherwise visually appearing out of specifications.
    - \* Even if the gravel is coming from an approved source, if a foreman has what the CIU determines to be unacceptable backfill material, the Foreman is liable.
  - \* All standing water pumped out of excavation
  - \* On standard backfill compaction equipment (Jumping-Jacks, plate compactors, etc) the Foreman must perform no more than 6” lifts with at least 5-7 passes each lift.
    - \* **The maximum allowed lift size for a hoe pack is 2’, unless otherwise authorized by PWD.**
    - \* **An Asphalt Plate Compactor is NOT an acceptable tool for gravel compaction during backfill procedures.**



# Item 7 – Controlled Density Fill

- \* Flow-Fill to be used only with permission from PWD
- \* 24" gravel buffer to be provided below pavement structure for drainage
- \* Min. 24 hr setup



**CITY of BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIU Inspection ☐ Other Inspection \_\_\_\_\_  
please specify complaint, RTA, BMSD, etc.

☐ Inspection items not performed Size of Cut on Permit: \_\_\_\_\_

**Roadway or Sidewalk?** \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Patch / Trench or Patch / Trench:** \_\_\_\_\_ **Depth?** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_

**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Secured?	YES NO	<input type="checkbox"/>
9. Two 5-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Final Paving Requirements	YES NO	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	YES NO	<input type="checkbox"/>
12. Temp Sidewalk Acceptable?	YES NO	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	YES NO	<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	YES NO	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	YES NO	<input type="checkbox"/>
Public Safety Issue?	YES NO	<input type="checkbox"/>
Violation Delivered?	YES NO	<input type="checkbox"/>
Utility Rep. Consented?	YES NO	<input type="checkbox"/>

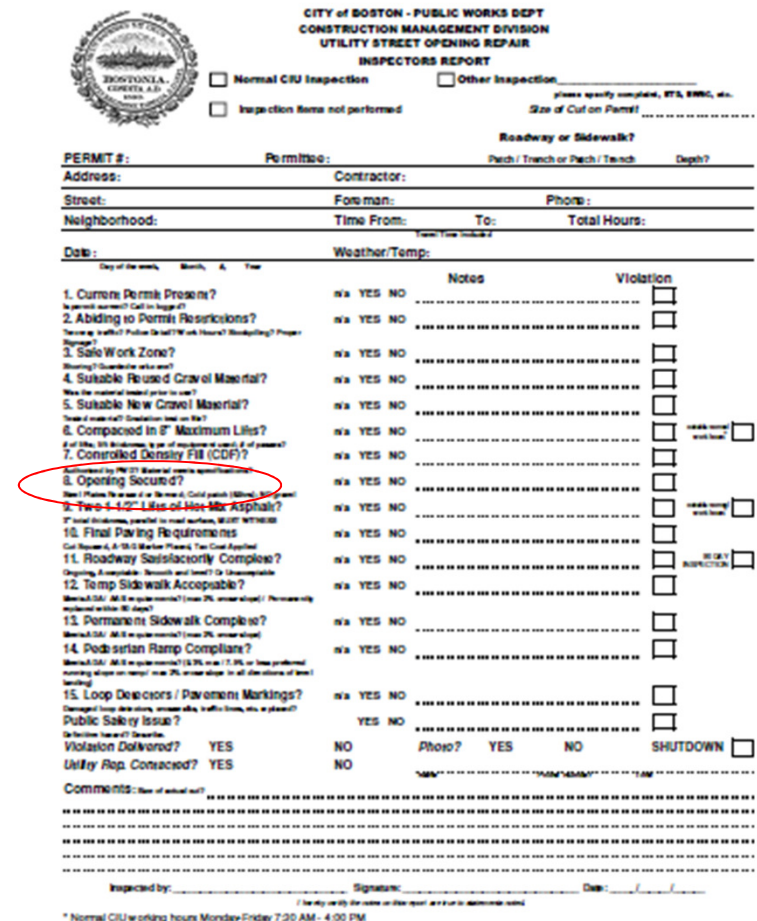
**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

# Item 8 – Opening Secured

- \* City expects all active work sites to be backfilled and paved every day.
- \* Steel Plates
  - \* To be used when conditions dictate
  - \* **Manpower and production reasons not valid**
  - \* City must be made aware of plated locations via call to the CIU, fax, or email.
  - \* Permittees are responsible for daily monitoring of plated locations.
- \* Plate installation
  - \* Minimum 18" over excavation
  - \* “Bermed” (24" ramp in path of travel)
  - \* Plate must have visible ID and Phone # for emergency contact on both sides.
  - \* **Monitor sidewalls, especially in wet weather**
  - \* Recessed (Leveling Course)



**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIU Inspection ☐ Other Inspection \_\_\_\_\_  
 (please specify complaint, RFD, RMD, etc.)  
☐ Inspection items not performed \_\_\_\_\_  
 Size of Cut on Permit \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Depth?** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
Time/Time Indicated

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_  
Day of the week, Month, A, Time

	YES	NO	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted In 8" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 4-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Public Safety Issues?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Delivered?	YES	NO	Photo? YES NO	SHUTDOWN <input type="checkbox"/>
Utility Rep. Contacted?	YES	NO		

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

# Steel Plate Ahead Signage

- \* Plating active excavations comes with the territory.
- \* Sites are typically plated 16 hours/day which creates a major liability.
- \* Signs will be secured to existing poles and will remain up until plates are removed.
- \* Required throughout both Construction Season and Winter Moratorium.
- \* Signs must be taken down after work is completed.





# Steel Plate Ahead (Spec)

- \* Retroreflective Florescent Orange (Type 4) Material
- \* Securely bracketed to pole 6' from bottom of sign to ground.
- \* Posted 200'-300' in advance of plated area.
- \* Must be placed in both directions if plates span across centerline.



Any steel roadway plate(s) located in a high concern area must have a skid resistant coating applied for the safety of the riders (Mandatory as of November 15<sup>th</sup>, 2013).

**Absolutely No openings are to be left in gravel, unless otherwise authorized by PWD**

Cold Patch/Silvex - Any excavation left to grade in Cold Patch asphalt must be monitored and replace within 48 hrs unless otherwise approved.

**Temporary Pedestrian Ramps must be ADA/AAB compliant at the end of each day.**

The City will not tolerate excavations that have not been secured as specified in the Rules and Specifications.

**The City will not accept excuses, lack of effort, or a lack of professionalism when it comes to securing job sites in the City of Boston.**

**Securing the Public's Safety comes before the convenience of doing work.**



# Not Acceptable!





# Acceptable.



# Inactive locations & Jackie's Law

## Jackie's law

- \* **Applies to unattended open trenches.**
- \* **Any public safety violation on unattended trenches will be cited under “Jackie’s Law” as well as BPWD Rules and Specifications.**
- \* **Any public safety violation on attended trenches will be a violation of OSHA as well as BPWD Rules and Specifications.**

Any site where the excavation is in excess of 3' below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15' will be subject to “Jackie’s Law” and all regulations therein.





# Skid-Resistant Plates

- \* In November of 2012 the City began exploring the use of skid-resistant roadway plates for “High Concern” locations that needed a greater amount of protection (bike lanes, bus lanes crosswalks, sidewalks, etc.).
- \* The City gave you a year notification regarding the use of skid-resistant plates.
- \* This allowed you to begin to find the best methodology and cost for obtaining skid-resistant plates.
- \* These plates are currently being used by all contractors throughout the City for the Winter Moratorium, and reports from both the contractors and our City inspectors have indicated that the plates are an improvement.
- \* **Skid Resistant plates have been mandatory since April 15<sup>th</sup> 2014 for all Permittees in “High Concern” locations throughout the City.**
- \* The City may decide to expand the use of Skid Resistant plates once it has been given a chance to further review the use and effectiveness of them.

- \* **Skid Resistant plates are now mandatory for ALL Permittees in ‘High Concern’ areas throughout the City.**

- \* ‘High Concern’ areas include:

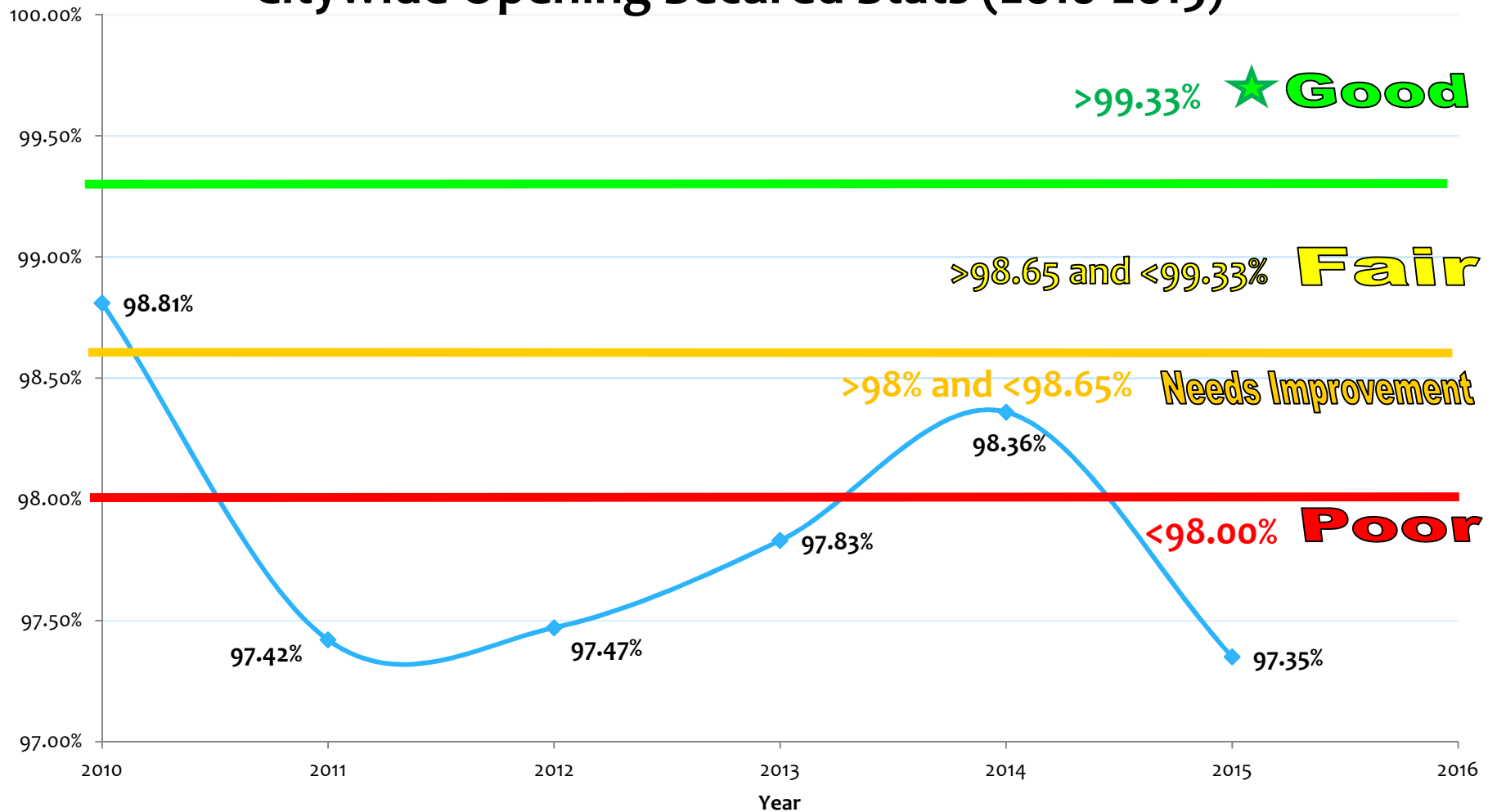
- \* **Crosswalks**
- \* **Sidewalks**
- \* **Bike Lanes**
- \* **Bus Lanes**
- \* **Steep Inclines**



- \* Skid resistant plate surface (grip) should be equal to or greater than the adjacent existing street or roadway surface.
- \* Speak to your fellow contractors for information on where to buy/rent skid-resistant plates.
- \* Make sure these plates are beige in color.
- \* **If the inspectors determine your skid-resistant plates do not meet our specifications, they will be rejected for use.**
- \* PWD will require you to provide us your inventory of these plates to ensure compliance.

# Opening Secured Trend Improving

## Citywide Opening Secured Stats (2010-2015)





# Need to Improve Plating

- \* With the exception of Eversource Energy, Comcast and Verizon, 2015 saw a decline in compliance for utility companies and private contractors alike in regard to properly securing the work zone at the end of the day.
- \* Crews need to focus on ensuring there is sufficient overlap of steel plates on the roadway (at least 18”) and that there is no movement or bending of the plates from traffic.
- \* The asphalt or cold patch berm around your plates must be compacted with a plate compactor.
  - \* The berm ramp should be at least 24” on the driven sides of the plate, and 18” on the non-driven sides of the plate. This provides a smooth ride and reduces the risk of shifting.
- \* **Failure to properly secure your plates is a serious violation and can result in an immediate shutdown of your active work.**

## Item 8 – Foreman Check List

- \* Before the Foreman and crew leave the job site at the end of their shift, they must have performed the following:
  - \* All paved areas (Cold Patch or HMA) are to grade of the existing roadway.
  - \* The work zone is swept and clean of debris and ADA/AAB compliant.
  - \* The sidewalls of the excavation has been inspected for stability and shored where needed before plating.
  - \* All plates must have the ID name and emergency contact phone number clearly visible.
  - \* The crew has observed vehicular traffic traveling over the plates to verify that no banging, bouncing, shifting, warping, vibration, etc. is taking place.
  - \* All posting dates are accurate with dates and permit information.
  - \* No equipment or material is stockpiled without the express permission from the BTB.

# Items 9 & 10 – Final Paving Requirements

- \* All openings must be precut in a neat line using motorized wheel cutting, saw cutting, cold planing, or pneumatic chiseling.
- \* Pavement edges shall be trimmed to a neat vertical face, free of loose materials and neatly aligned with the centerline of the trench.
- \* The shape of the pavement cut-outs shall be rectangular.
- \* All irregular shaped cuts or damaged pavement shall be repaired at the expense of the Permittee.

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIR Inspection ☐ Other Inspection \_\_\_\_\_  
 Inspection items not performed \_\_\_\_\_  
 please specify completed, RTD, RMC, etc.  
 Size of Cut on Permit \_\_\_\_\_

**Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Street:** \_\_\_\_\_ **Neighborhood:** \_\_\_\_\_  
**Foreman:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Item	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Security?	YES NO	<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Final Paving Requirements	YES NO	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	YES NO	<input type="checkbox"/>
12. Temp Sidewalk Accessible?	YES NO	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	YES NO	<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	YES NO	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	YES NO	<input type="checkbox"/>
Public Safety Issues?	YES NO	<input type="checkbox"/>
Violation Delivered?	YES NO	<input type="checkbox"/>
Utility Rep. Consented?	YES NO	<input type="checkbox"/>

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIR working hours Monday-Friday 7:30 AM - 4:00 PM

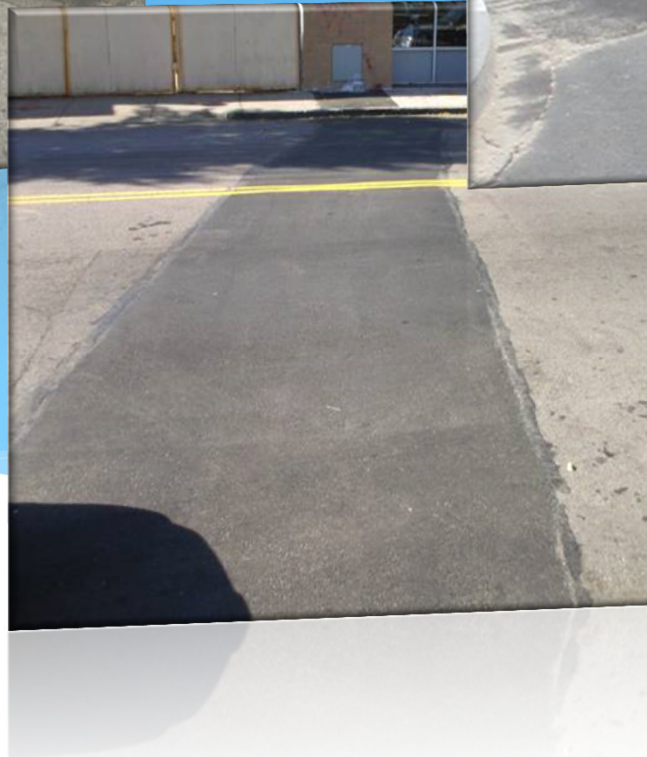
- \* A Tack Coat shall be painted to the pavement sidewalls of the entire excavation to prevent water infiltration.
- \* The asphalt cross-section is to be applied in two even lifts. **This is critical to have a good smooth level patch.** Leave at least 1.5” of space between the base course and the grade of the road to allow for enough top to be placed.
- \* The first lift must consist of 1.5” Boston dense binder or Boston modified top unless otherwise approved.
- \* The last lift must consist of 1.5” Boston top unless otherwise approved.
- \* Proper compaction equipment must be used.
- \* **Utility Repair Tags must be installed in any temporary cold patch, silvex, or asphalt material placed in a patch or trench.**

**Not Cut Squared, No Tack Coat,  
Road Gouged, No Tag... Unacceptable!**





# Cut Squared, Smooth & Level



# Items 9 & 10 – Foreman Check List

- \* Before the final paving has taken place, the Foreman must have performed the following:
  - \* The pavement cut has been squared off with vertical sidewalls in neat, straight lines.
  - \* The pavement sidewalls are clear of debris and have had a tack coat applied.
  - \* The crew has a supply of both HMA Binder and Top.
  - \* Trench Uneven signs posted for major work.
  - \* Proper compaction equipment is available, and used (mechanical roller, plate compactor, etc.).
  - \* Asphalt is compacted in two even lifts with approved material.
  - \* Utility Repair Tags are updated and enough are on site for every cold patch, silvex, or asphalt patch/trench.

# Item 11 – Roadway Satisfactorily Complete

- \* If our procedures are followed, the final result should be (and remain) smooth & level.
- \* Violations regarding the failure of roadway patches and trenches remain the biggest contributor to the unacceptable compliance rating.
  - \* Settled patches
  - \* Patches humped above grade
  - \* Not cut squared
  - \* Not smooth and level
  - \* Improper pavement material, etc.

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIRU Inspection ☐ Other Inspection \_\_\_\_\_  
 (please specify completed, RTB, RMC, etc.)  
☐ Inspection items not performed \_\_\_\_\_  
 Size of Cut on Permit: \_\_\_\_\_

**Roadway or Sidewalk?** \_\_\_\_\_  
 Patch / Trench or Patch / Trench \_\_\_\_\_ Depth? \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Notes	Violation
1. Current Permit Present?	YES NO
2. Abiding to Permit Restrictions?	YES NO
3. Safe Work Zone?	YES NO
4. Suitable Reused Gravel Material?	YES NO
5. Suitable New Gravel Material?	YES NO
6. Compacted In 8" Maximum Lifts?	YES NO
7. Controlled Density Fill (CDF)?	YES NO
8. Opening Secured?	YES NO
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO
10. Final Paving Requirements?	YES NO
11. Roadway Satisfactorily Complete?	YES NO
12. Temp Sidewalk Accessible?	YES NO
13. Permanent Sidewalk Complete?	YES NO
14. Pedestrian Ramp Complete?	YES NO
15. Loop Detectors / Pavement Markings?	YES NO
Public Safety Issues?	YES NO
Violation Delivered?	YES NO
Utility Rep. Consented?	YES NO

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIRU working hours Monday-Friday 7:30 AM - 4:00 PM

# Unacceptable Final Repair

- \* **Quality of roadway patches show improvement, but remains unacceptable. Continue improving!**
- \* Final repairs are considered unacceptable when:
  - \* The loop detectors or pavement markings are not replaced as required
  - \* The excavation patch is not to grade with the roadway/sidewalk; is not cut squared; or improper material was used
  - \* Sidewalk locations were not repaired within 60 days as required

# Overall Significant Improvement!

Over the past three years there has been a 10% improvement in the final paving product!

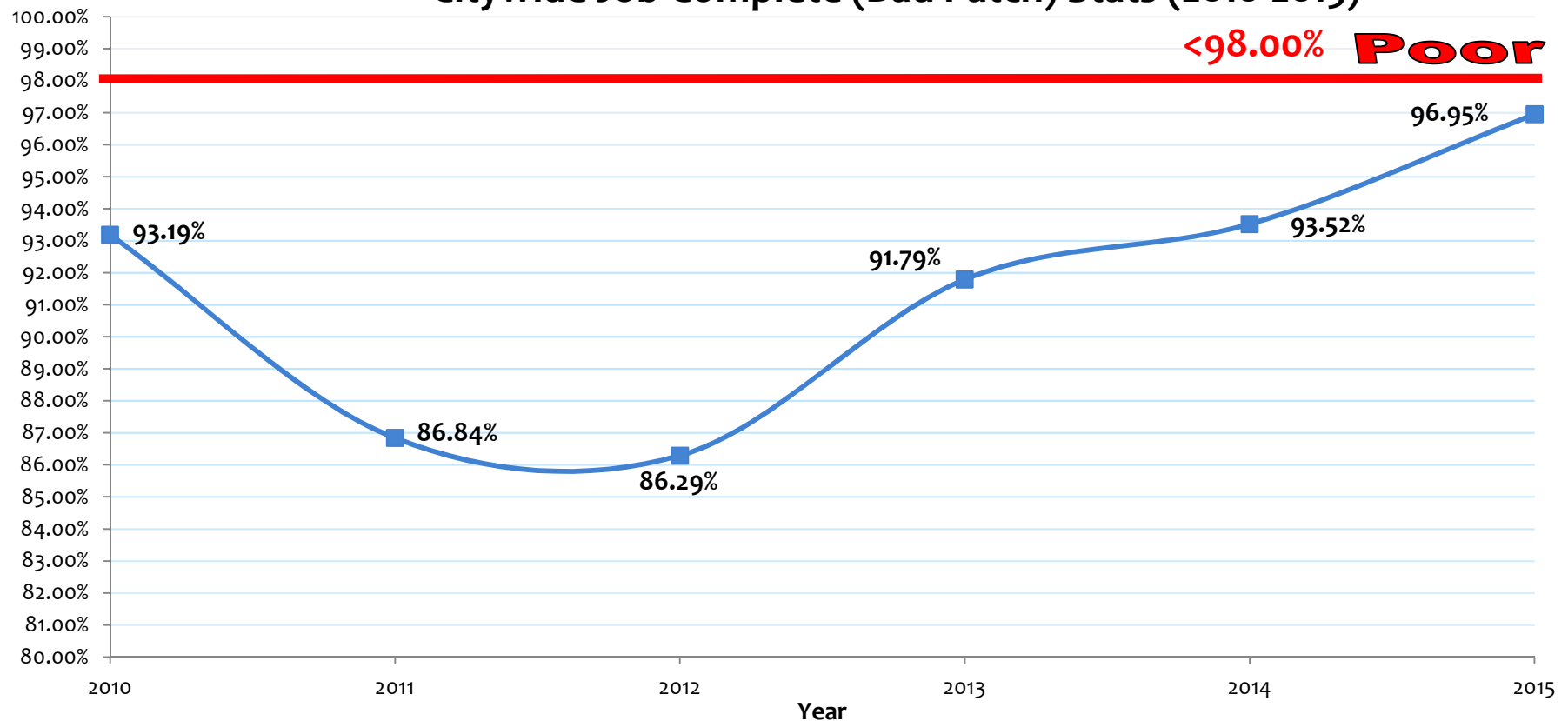
<b>Non Compliance Decline</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Overall</b>	98.71%	98.09%	97.39%	97.66%	97.83%	98.10%
Opening Secured	98.81%	97.42%	97.47%	97.48%	98.36%	97.35%
Final Paving Product	93.19%	86.84%	86.29%	91.19%	93.52%	96.95%

The Overall Compliance rating is the best  
that it has been in 5 years!



# Not Cut Squared & Not Smooth and Level Patch Stats (2010-2015)

Citywide Job Complete (Bad Patch) Stats (2010-2015)



# 90-Day ReInspection

## CIU's Most Critical Inspection

- \* The CIU inspects excavation work a minimum of 90 days after the completion of construction work.
- \* If your patch or trench patch remains smooth & level at least 90 days after your work is completed it is not likely settle.
- \* **I consider this to be the most important statistic, and a true indicator of the effectiveness of the CIU.**
- \* The initial final repair inspection is important, but if this percentage is unacceptable then it's all for naught.
- \* Compaction is the key to having quality work.
- \* The Hansen Permitting and Reporting Program will now track 90 day inspection findings.
- \* In past years the average acceptability rating has been over 98%

# Unacceptable Patch/Trenches

## “Bad Patch” – procedure must be followed

- \* Identified by CIU as “unacceptable” under Items 11, 12, & 13
- \* Utility Contractor Notified by EMAIL or PHONE
- \* Utility has 48 hrs to confirm or contest
  - \* Contested patches on hold until field meeting
  - \* Confirmed have until end of following week to repair
    - \* No communication results as “conformation” of ownership
- \* **Failure to address bad patches result in suspension of permits**
- \* **Public Safety locations require immediate response**
- \* Report Card - Tool used for self evaluation
- \* **No New Permit Requests will be issued until all existing bad patches have been repaired as required.**

# BAD PATCH RESPONSE TIMELINES

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc...)	Protection site within <b>1 Hour</b> ; Mobilize crew for repair <b>within 3 Hours</b>
2" or Greater Settled	Must repair within <b>2 business days</b> of notification
Less than 2" Settled	Within <b>7-13 Days</b> of notification
Permanent Sidewalk Repair	Return to existing within <b>60 Days</b> after initial repair (Alternative - PWD will allow Repairs by Neighborhood = Increases production)
Pavement Marking/Loop Detectors	Within <b>3 Days</b> of notification

# Items 12 – Temporary Sidewalk

- \* Temporary Sidewalk repairs are to be made immediately
  - \* MA AAB/ADA compliant
    - \* Sidewalk cross slope must not exceed 2% (Strive for 1.5%)
    - \* Ramp cross slope must not exceed 8.3% (Strive for 7.5%)
  - \* Maintain a compliant temporary passageway of a minimum of 4' around construction area (See BTM Traffic Management Plan)
  - \* If unable to maintain minimum 4' passageway the Permittee must provide two (2) MUTCD R9-10 "Sidewalk Closed – Use Other Side" signs for either side of the site at the nearest intersecting pedestrian ramps.
  - \* 3" HMA installed in 2 even lifts, smooth and level.

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIR Inspection ☐ Other Inspection \_\_\_\_\_  
please specify completed, RFD, RMD, etc.

☐ Inspection items not performed Size of Cut on Permit \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Patch / Trench or Patch / Trench** \_\_\_\_\_ **Depth?** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
Time Zone Indicated

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

	Notes	Violation
1. Current Permit Present?	Y/N	YES NO
2. Abiding to Permit Restrictions?	Y/N	YES NO
3. Safe Work Zone?	Y/N	YES NO
4. Suitable Reused Gravel Material?	Y/N	YES NO
5. Suitable New Gravel Material?	Y/N	YES NO
6. Compacted In 8" Maximum Lifts?	Y/N	YES NO
7. Controlled Density Fill (CDF)?	Y/N	YES NO
8. Opening Secured?	Y/N	YES NO
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	Y/N	YES NO
10. Final Paving Requirements?	Y/N	YES NO
11. Roadway Satisfactorily Complete?	Y/N	YES NO
12. Temp Sidewalk Acceptable?	Y/N	YES NO
13. Permanent Sidewalk Complete?	Y/N	YES NO
14. Pedestrian Ramp Compliant?	Y/N	YES NO
15. Loop Detectors / Pavement Markings?	Y/N	YES NO

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIR working hours Monday-Friday 7:30 AM - 4:00 PM

Constituents need to traverse these patches! Uneven patches lead to possible injuries.



# Not Acceptable!



# Acceptable.





# Items 13 – Permanent Sidewalk

- \* Permanent repair to be made within 60 days of temporary repair
- \* Abide by City material/installation specs.
- \* Edge stone to be reset within area of repair.
- \* Entire flag must be replaced
- \* Must notify City 24 hours before PCC work takes place.
- \* MA AAB/ADA compliant (see Item 12)
- \* If any portion of an existing pedestrian ramp is disturbed by construction, Permittee shall be required to reconstruct the ramp to current ADA/AAB regulations.
- \* Permittee not responsible for AAB reciprocal provision.
- \* Utilities must maintain database of sidewalk restoration locations.

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**CONSTRUCTION MANAGEMENT DIVISION**  
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**INSPECTORS REPORT**

☐ Normal CIU Inspection ☐ Other Inspection \_\_\_\_\_  
 Inspection items not performed \_\_\_\_\_  
 please specify completed, RTB, RMC, etc.  
 Size of Cut on Permit \_\_\_\_\_

**Roadway or Sidewalk?** \_\_\_\_\_  
 Patch / Trench or Patch / Trench \_\_\_\_\_  
 Depth? \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Day of the week, Month, A, Year	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted In 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Secure?	YES NO	<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Final Paving Requirements?	YES NO	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	YES NO	<input type="checkbox"/>
12. Temp Sidewalk Accessible?	YES NO	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	YES NO	<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	YES NO	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	YES NO	<input type="checkbox"/>
Public Safety Issues?	YES NO	<input type="checkbox"/>
Violation Delivered? YES NO	Photo? YES NO	<input type="checkbox"/>
Utility Rep. Consented? YES NO		<input type="checkbox"/>

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

Graffiti



Messy Work







Concrete sidewalk flags no larger than 36 sq feet  
Expansion joints placed every 30 linear feet





**Slope must be ADA/AAB compliant or else it will be **REJECTED** by the Public Works Department (<2%)**

# Concrete Requirements

- \* Concrete shall be air entrained, 4000 psi, and three-quarter ( $\frac{3}{4}$ ) inch maximum size aggregate with 660 lbs of cement per cubic yard of concrete. Entrained air shall be between 5.5% and 7.5% with a slump not to exceed four-and-one ( $4\frac{1}{2}$ ) half inches. ASTM C150 Type 11 cement shall be used. The use of mineral additives or supplements such as Ground Granulated Blast Furnace Slag, Fly Ash, Silica Fume or Micro Silica is prohibited. Normal weight aggregate shall conform to ASTM C33, containing no deleterious substances, which cause surface spalling. The Permittee must certify that no alkali reactivity is produced with the proposed aggregate-cement combinations when tested in accordance with ASTM C227.
  - \* All concrete shall be produced in accordance with the approved mix designs. The Permittee shall comply with ACI 304 and 309 as herein specified.
  - \* The Permittee shall be allowed to add water for slump adjustment, but is required to adhere to the standards of ASTM C94. This standard allows for slump adjustment on site if the truck arrives with a concrete slump less than four-and-one-half ( $4\frac{1}{2}$ ) inches. This shall only be allowed if the following conditions are satisfied:
    - \* The water addition shall not increase the water cement ratio above the maximum permitted by the specification.
    - \* The water shall be added to the entire batch, not in the middle or end of the batch.
    - \* Water addition is not allowed to by-pass the  $1\frac{1}{2}$  hour or 300 revolution criteria.
    - \* Water shall be added into the batch at the head section of the drum or by injection into the head and discharge section of the drum.
    - \* Water added requires an additional 30 revolutions at mixing speed.
    - \* The driver's delivery ticket shall document any water withheld at the batching plant.

# Concrete Testing: Ready Mix

- \* All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- \* Once approved you will be allowed to sell and provide concrete in the City of Boston.
- \* The City will periodically test your material in the field or at your plant.
- \* The good news is that all of the suppliers in 2015 were approved and tested consistently throughout the construction season.
- \* Thank you for supplying the City of Boston with the concrete material we need to restore our sidewalks.

# Testing Specifications

- \* Major Utility Companies will be required to notify Public Works 24 hours before pouring concrete sidewalks.
  - \* 24 hour requirement will include field batching of concrete.
  - \* Must submit a monthly list of completed sidewalk locations to PWD via email for inspection purposes.
- \* Materials will be tested at the plant or on site.
  - \* Material must meet all contract specifications including: strength, 4000 psi,  $\frac{3}{4}$ " aggregate,  $\leq 4\%$  slump, etc. (see contract specifications for more details)
- \* Sidewalks must be poured to meet the depth of adjacent sidewalk, but not less than 6"
- \* Concrete testing is at the expense of the Permittee.



# Concrete Testing: Mobile Mixers

- \* All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- \* All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- \* The City may require crews to meet with Briggs Engineering and/or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- \* Once approved you will be allowed to sell and provide concrete in the City of Boston.
- \* Your company must never tamper with the job mix formula in the field.
  - \* Need job mix formula with slip on work site at all times.
- \* The City will periodically test your material in the field.



# Brick Sidewalk Repairs

- \* The CIU reports show that many Permittees performed unacceptable brick work in the past couple of years.
  - \* Every Permittee must have a competent crew that specializes in brick restoration.
- \* All Permittees will be responsible for adjusting any edge stone within the limits of the sidewalk repair.
- \* Proper material and testing requirements must be met.
  - \* Material and specifications are available on the PWD website.

# Unacceptable Workmanship!



**Bricks should be wire cut and professionally laid.**



- \* All Permittees will be required to provide the CIU/BTD with the repair schedule of sidewalk locations 48 hours before performing the work.**
- \* All notifications must be sent via email to:**
  - \* [Mark.Cardarelli@boston.gov](mailto:Mark.Cardarelli@boston.gov);**
  - \* [Michael.Kinson@boston.gov](mailto:Michael.Kinson@boston.gov);**
  - \* [Edward.Hesford@boston.gov](mailto:Edward.Hesford@boston.gov);**
  - \* [Keith.Collins@boston.gov](mailto:Keith.Collins@boston.gov);**
  - \* [Michael.Somers@boston.gov](mailto:Michael.Somers@boston.gov);**
  - \* [Sierra.Tilton@boston.gov](mailto:Sierra.Tilton@boston.gov);**
  - \* [Troy.Harris@boston.gov](mailto:Troy.Harris@boston.gov)**
- \* Your company must also submit the online Utility Call-In Form notifying the City of your pending construction.**
- \* All concrete testing requirements are at the expense of the Permittee.**



- \* Each month the CIU will provide all Permittees a list of overdue (beyond 60 days) permitted sidewalk locations requiring permanent repair.
- \* Upon receipt of this list all Permittees will have 7 days to acknowledge ownership (via email) and present a planned schedule for restoration to the PWD.
- \* If overdue restorations are not completed within 30 days, PWD will deny all new permit requests.
- \* Repairs by Neighborhood may be an option instead of within the 60 day requirement, pending PWD approval.
  - \* Approval may result in the above timelines not being enforced for that company.
- \* All Permittees must be vigilant regarding the impact to, and safety of, pedestrians during construction.



## Items 12 & 13 – Foreman Check List

- \* Does your permit allow for sidewalk work?
- \* Has CIU/BTD been notified at least 48 hours in advance?
- \* If access to the sidewalk will be affected, do you have approved sidewalk closed signs?
  - \* Signs must be placed at the nearest pedestrian ramp on either side of the construction.
- \* For work on the sidewalk where Pedestrian access is not blocked is there at least 4 feet of access?
  - \* All sidewalk work must have approved MUTCD barricades in place.
- \* Any edge stone within your permanent restoration limits must be reset, even if it was not damaged due to your work.
- \* Are you using approved material?
  - \* All excavated sidewalk material must be repaired in kind.
- \* All temporary and permanent sidewalk repairs must meet ADA/AAB slope requirements.

# Item 14 – Permanent Ramp Compliance

- \* If any portion of a Pedestrian Access Ramp is disturbed, including the landing or abutting edge stone, the ramp becomes the responsibility of the Permittee for repair.
- \* All unacceptable ramps must be replaced to ADA/AAB specifications with appropriate cross slope requirements.
- \* 8.3% max running slope on ramp with 7.5% or less preferred
- \* Max 2% cross slope in all directions of level landing

**CITY of BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

☐ Normal CIU Inspection ☐ Other Inspection (please specify complete, WTS, SWS, etc.)  
☐ Inspection items not performed (Size of Cut on Permit)

Permit #: \_\_\_\_\_ Roadway or Sidewalk? \_\_\_\_\_  
 Address: \_\_\_\_\_ Patch / Trench or Patch / Trench \_\_\_\_\_ Depth? \_\_\_\_\_  
 Street: \_\_\_\_\_ Contractor: \_\_\_\_\_  
 Neighborhood: \_\_\_\_\_ Foreman: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Time From: \_\_\_\_\_ To: \_\_\_\_\_ Total Hours: \_\_\_\_\_  
 Date: \_\_\_\_\_ Weather/Temp: \_\_\_\_\_

Day of the week, Month, A, Year	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Secure?	YES NO	<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Final Paving Requirements?	YES NO	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	YES NO	<input type="checkbox"/>
12. Temp Sidewalk Acceptable?	YES NO	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	YES NO	<input type="checkbox"/>
14. Pedestrian Ramp Compliance?	YES NO	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	YES NO	<input type="checkbox"/>
Public Safety Issues?	YES NO	<input type="checkbox"/>
Violation Delivered?	YES NO	<input type="checkbox"/>
Utility Rep. Contacted?	YES NO	<input type="checkbox"/>

Comments: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

If in doubt, call the City. Our Engineers will be happy to assist you!

# Item 15 – Pavement Markings & Loop Detectors

- \* Loop detectors, pavement markings, signage etc.
- \* Maintain pavement markings during construction (paint).
- \* Partial damage to crosswalks results in complete restoration.
- \* **Public's Safety possibly compromised**
- \* Damaged pavement markings must be replaced no later than 72 hours after completion of work.
- \* Permittees must internally track locations needing pavement markings and loop detector replacing

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTOR'S REPORT**

☐ Normal CIRU Inspection ☐ Other Inspection \_\_\_\_\_  
please specify completed, RTB, RMC, etc.

☐ Inspection items not performed Size of Cut on Permit: \_\_\_\_\_

**Roadway or Sidewalk?** \_\_\_\_\_  
**Permit #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Patch / Trench or Patch / Trench:** \_\_\_\_\_ **Depth?** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

	YES	NO	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secure?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Double Safety Issues?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Delivered?	YES	NO	Photo?	YES
Utility Rep. Contacted?	YES	NO		SHUTDOWN

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIRU working hours Monday-Friday 7:30 AM - 4:00 PM

# Pavement Markings

- \* Pavement Markings on Arterials must have temporary tape applied before the required 72 hour permanent replacement application.
- \* **The BTM and the CIU have increased their vigilance regarding Disrupted Pavement Markings.**
- \* Pavement Markings that have been impacted by a Permittee and not repaired within the required period of time may compromise the public's safety.
- \* When excavation work interrupts a crosswalk, the entire crosswalk must be restored by the Permittee, unless otherwise authorized by the PWD and BTM.
- \* **Patches or trenches without the required pavement markings are an incomplete product. This conveys to the public that City and the Permittees are not doing the job "right".**
- \* Disrupted pavement markings are now added to the "Bad Patch" listing.

# Bike Lanes

- \* Boston Bikes is part of the Mayor Walsh's vision for a vibrant and healthy city that benefits all its citizens.
- \* Since 2007 the City has increased the number of bike lanes throughout Boston dramatically.
- \* New bike lanes are added each year.
- \* All bike lane routes are in COBUCS.
- \* On any proposed utility or contractor work in conflict with completed bike lanes in the COBUCS, the Permittee **MUST coordinate with the BTD Engineering Department to review plans and determine whether or not the project will disrupt any bike lane markings.**



- \* The Public Works Department will not release a COBUCS entry in conflict with completed bike lane markings until either receiving confirmation by the BTB that your work does not interrupt the pavement markings, or until your company provides a copy of sketching detailing the replacement of the bike lane(s).
- \* All bike lane markings must be replaced within 3 days of completion of work.
- \* **Any steel roadway plate(s) located within a bike lane must have a skid resistant coating applied for the safety of the riders.**

# Loop Detectors

- \* Contractors shall notify the BTD Traffic Management Center (617-635-4430), at least 48 hours prior to starting any construction that will impact loop detector/signal operations.
- \* Contractors shall replace loop detectors within 72 hours of completion of work, and notify the BTD Traffic Management Center to schedule a traffic signal inspection of the intersection.
- \* Loop detectors shall be replaced by a BTD approved traffic signal contractor in accordance with BTD specifications.



# Public Safety

- \* Signals an egregious disregard for City Rules and Specifications
- \* **Will result in meeting/shutdown**
- \* **Possibility of all active work zones being shut down (Excluding Emergency work)**
- \* Public Safety violations will be taken into account during Winter Moratorium requests.
- \* The City of Boston keeps record of ALL violations against the Rules and Specifications.
- \* Such violations are taken into consideration, especially in regard to public safety, in the Permit Application Process.

**CITY of BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTOR'S REPORT**

☐ Normal CIU Inspection ☐ Other Inspection \_\_\_\_\_  
please specify completed, RTB, RMBC, etc.

☐ Inspection items not performed Size of Cut on Permit \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Patch / Trench or Patch / Trench** \_\_\_\_\_ **Depth?** \_\_\_\_\_

**Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Day of the week, Month, A, Year	Notes	Violation
1. Current Permit Present?	YES NO	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	YES NO	<input type="checkbox"/>
3. Safe Work Zone?	YES NO	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	YES NO	<input type="checkbox"/>
5. Suitable New Gravel Material?	YES NO	<input type="checkbox"/>
6. Compacted In 8" Maximum Lifts?	YES NO	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	YES NO	<input type="checkbox"/>
8. Opening Secured?	YES NO	<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	YES NO	<input type="checkbox"/>
10. Final Paving Requirements	YES NO	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	YES NO	<input type="checkbox"/>
12. Temp Sidewalk Accessible?	YES NO	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	YES NO	<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	YES NO	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	YES NO	<input type="checkbox"/>
<b>Public Safety Issue?</b>	YES NO	<input type="checkbox"/>
<b>Violation Delivered?</b> YES	NO	<input type="checkbox"/>
<b>Utility Rep. Connected?</b> YES	NO	<input type="checkbox"/>

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM








# Violation Sheet

\* Issued to crew on active work sites. For inactive sites, the CIU maintains a copy of the Violation and a notice is sent.

\* Sites section/article from City Rules & Specifications

 <b>VIOLATION</b> <b>CITY OF BOSTON PUBLIC WORKS DEPARTMENT</b> <b>RULES AND SPECIFICATIONS FOR EXCAVATION WITHIN THE CITY OF BOSTON</b> <b>February 17<sup>th</sup>, 2006 Edition</b>		
<input type="checkbox"/> 1. Current Permit Present	<ul style="list-style-type: none"> <li>Section 4.09, Article A 2</li> <li>Section 4.09, Article A 2</li> <li>Section 4.09, Article A 2</li> <li>Section 1.01, Article L</li> </ul>	Working without a permit Working with an expired permit Current permit not on site No Call-in Page 29 Page 29 Page 29 Page 6
<input type="checkbox"/> 2. Abiding to Permit Restrictions	<ul style="list-style-type: none"> <li>Section 3.10, Article M</li> <li>Section 3.07, Article C</li> <li>Section 3.07, Article C</li> <li>Section 3.07, Article C</li> <li>Section 3.07, Article C</li> </ul>	No Ground ID sign(s) Not maintaining 2-way traffic No Police Detail Unauthorized stockpiling Working outside LTD time restrictions Page 16 Page 14 Page 14 Page 14 Page 14
<input type="checkbox"/> 3. Safe Work Zone	<ul style="list-style-type: none"> <li>Section 3.10, Article G</li> <li>Section 3.10, Article I</li> <li>Section 4.02, Article C</li> </ul>	Unsafe work zone Work zone not clean and/or swept No shoring or inadequate shoring where required Page 16 Page 16 Page 19
<input type="checkbox"/> 4. Suitable Reused Gravel Material	<ul style="list-style-type: none"> <li>Section 4.04, Article J</li> </ul>	Use of untested excavated material Page 22
<input type="checkbox"/> 5. Suitable New Gravel Material	<ul style="list-style-type: none"> <li>Section 4.08, Article A</li> </ul>	Not MHD M1.03.1 approved process gravel for sub-base Page 27
<input type="checkbox"/> 6. Compacted in 8" Maximum Lifts	<ul style="list-style-type: none"> <li>Section 4.04, Article I</li> <li>Section 4.04, Article I</li> <li>Section 4.04, Article K</li> </ul>	Not compacting in eight (8") lifts Failure to achieve 95% laboratory maximum dry density No control test strip for equipment achieving lifts greater than 8" Page 22 Page 22 Page 22
<input type="checkbox"/> 7. Controlled Density Fill (CDF)	<ul style="list-style-type: none"> <li>Section 4.05, Article A</li> </ul>	CDF usage is unapproved Page 23
<input type="checkbox"/> 8. Opening Secured	<ul style="list-style-type: none"> <li>Section 4.03, Article A</li> <li>Section 4.03, Article B</li> <li>Section 4.03, Article D</li> <li>Section 4.03, Article E 1</li> <li>Section 4.03, Article E 2</li> <li>Section 4.03, Article E 5</li> <li>Section 4.06</li> <li>Section 4.06</li> <li>Section 5.05</li> <li>Section 5.05</li> </ul>	Steel plate(s) unsecured; (movement/bending/vibration/loud banging etc.) Steel plate(s) not completely covering open excavation with minimum 18" overlap Steel plate(s) with no company name and/or phone number Steel plate(s) not recessed where required Steel plate(s) not bermed properly No explanation in writing when steel plates cannot be recessed Roadway opening left in gravel Cold patch in street opening not replaced with HMA within 48 hours Sidewalk opening left in gravel Cold patch in sidewalk opening not replaced with HMA within 48 hours Page 20 Page 20 Page 20 Page 20 Page 20 Page 20 Page 23 Page 23 Page 40 Page 40

UTILITY NAME \_\_\_\_\_

LOCATION \_\_\_\_\_ PERMIT # \_\_\_\_\_

VIOLATION SECT. \_\_\_\_\_ VIOLATION ART. \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

City of Boston Public Works  
Violation Page 1 of 2

# Noncompliance Rating

Ratings changed to a 100% point Scaling System.



$$\left( \frac{\text{SUM OF VIOLATIONS}}{\text{SUM OF INSPECTION ITEMS}} \right)$$

$100.00\% \leq \text{Good} < 99.33\%$

$99.33\% \leq \text{Fair} < 98.65\%$

$98.65\% \leq \text{Needs Improvement} < 98.00\%$

$98.00\% \leq \text{Poor}$

Scale developed from historical data as  
collected by CIU inspections.

# Cooperative Effort

In 2007 the BPWD began weekly transmissions of rating summaries (Report Cards) to major utilities..

- \* Valuable tool for City & utilities.
- \* Provides comparison to citywide average.
- \* We welcome feedback.

# CIU Weekly Report Card Update

## City of Boston leading the way...

*Cover sheet w/ explanation & # of inspections*

**CITY OF BOSTON**  
**Public Works Department**  
**Weekly Update for NSTAR Electric**

This report represents a summary of your utility construction performance as assessed by the Boston Public Works Department (BPWD) during the time period of:

10/1/2007 to 10/31/2007

Inspections are performed using a standard 85-item report which evaluates key construction items based on Public Works Department rules and specifications. The items address the conventional process of street excavation, including excavation, backfilling, paving, and also monitor permit restrictions and safety. Inspections are made throughout the life of the job, and not all items are relevant during a particular visit. When found in non-compliance with a particular inspection item, the CIU will issue a violation to the electrician. During the time period of this report, the CIU has issued your electrician the following number of items:

# Of Site Visits = 118

From the data acquired by these reports, the CIU calculates a non-compliance rating to qualify the performance of companies working in the public way. The rating is calculated and scored using the following system:

Non-compliance Rating Percentage =  $\frac{\text{SUM OF VIOLATIONS}}{\text{SUM OF INSPECTION ITEMS}}$

Rating Scale %  
0.00 = GOOD  
0.01 - 1.00 = SATISFACTORY  
1.01 - 2.00 = NEED IMPROVEMENT  
2.01 - 3.00 = POOR

In this report your rating is analyzed by inspection items to allow for identification of weak points in construction. Citywide averages are provided for comparison purposes. Also, we have included a year-to-date rating summary for comparison and trends. Violations issued during the assessment period of work, we have with their description and location. The first week of each month we will provide you with the previous month's rating.

If at any time a non-compliance rating should rise above 2.00% you will be required to attend a meeting with CIU representatives to discuss current construction practices. To prevent further action by the City, an appropriate level of improvement must result from such a meeting. Electrical violation levels of a particular inspection item will result in a similar process regardless of overall rating.

Should you have questions or comments related to this or any other CIU procedures, do not hesitate to contact the Boston Public Works Department at 617-635-5555. It is our hope that this weekly update will be used as a tool to improve utility construction in the city.

The Boston Public Works believes that utility companies can function as our partners in the difficult job of maintenance and upgrade of Boston's infrastructure.

We thank you for your continued cooperation.

**Block Contacts:**  
Chief Engineer  
Construction Supervisor Bill O'Brien  
Boston Public Works Department

Weekly Date 10/31/07 Page 1 of 1

**Weekly Update for NSTAR Electric**

Inspection Item	# of Violations	# of Inspections	Weekly Compliance %	Year-to-Date Compliance %	Year-to-Date # of Sites	Year-to-Date # of Items
1. Current Permit Present?	40	0	0.00%	0.00%	0.00%	0.00%
2. Adding to Permit Restrictions?	40	0	0.00%	0.00%	0.00%	0.00%
3. Safe work Zone?	47	0	0.00%	0.00%	0.00%	0.00%
4. Suitable Reusable Gravel Material?	0	0	0.00%	0.00%	0.00%	0.00%
5. Suitable New Gravel Material?	13	0	0.00%	1.18%	0.00%	0.00%
6. Compacted in 8" Maximum Lifts?	10	0	0.00%	0.00%	0.00%	0.00%
7. Controlled Density Fill (CDF)?	0	0	0.00%	0.00%	0.00%	0.00%
8. Opening Secured?	42	1	1.61%	1.60%	1.61%	3.61%
9. Edges Straight and Vertical?	11	0	0.00%	0.00%	1.31%	1.31%
10. Two 1-1/2" Lifts of Hot Mix Asphalt?	3	0	0.00%	0.00%	0.00%	0.00%
11. Roadway Satisfactorily Complete?	12	0	0.00%	4.17%	2.00%	4.17%
12. Temp Sidewalk Complete?	7	1	14.29%	3.20%	2.60%	3.60%
13. Permanent Sidewalk Complete?	3	0	0.00%	0.00%	4.10%	10.10%
14. Loop Detectors/Crosswalks?	1	0	0.00%	0.00%	71.43%	34.30%
15. Public Safety Issues?	0	0	0.00%	0.00%	0.00%	0.00%

Overall Non-compliance Rating = 0.77%

Rating Scale %  
0.00 = GOOD  
0.01 - 1.00 = SATISFACTORY  
1.01 - 2.00 = NEED IMPROVEMENT  
2.01 - 3.00 = POOR

Weekly Date 10/31/07 Page 1 of 1

*Rating Summary Sheet*

**Weekly Update for NSTAR Electric**

DATE: 10/31/07  
SUBMIT BY: [Name]  
LOCATION: [Address]  
ADDRESS: [Address]  
CONTRACTOR: [Name]

REMARKS: [Text]

CONTRACTOR'S SIGNATURE: [Signature]

Weekly Date 10/31/07 Page 1 of 1

*Individual Violations*

**Weekly Update for NSTAR Electric**

Item	Location	Violation	Inspector	Date
1	North Dorchester	Violations	Inspector	Date
2	North Dorchester	Violations	Inspector	Date
3	North Dorchester	Violations	Inspector	Date
4	North Dorchester	Violations	Inspector	Date
5	North Dorchester	Violations	Inspector	Date
6	North Dorchester	Violations	Inspector	Date
7	North Dorchester	Violations	Inspector	Date
8	North Dorchester	Violations	Inspector	Date
9	North Dorchester	Violations	Inspector	Date
10	North Dorchester	Violations	Inspector	Date
11	North Dorchester	Violations	Inspector	Date
12	North Dorchester	Violations	Inspector	Date
13	North Dorchester	Violations	Inspector	Date
14	North Dorchester	Violations	Inspector	Date
15	North Dorchester	Violations	Inspector	Date
16	North Dorchester	Violations	Inspector	Date
17	North Dorchester	Violations	Inspector	Date
18	North Dorchester	Violations	Inspector	Date
19	North Dorchester	Violations	Inspector	Date
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21	North Dorchester	Violations	Inspector	Date
22	North Dorchester	Violations	Inspector	Date
23	North Dorchester	Violations	Inspector	Date
24	North Dorchester	Violations	Inspector	Date
25	North Dorchester	Violations	Inspector	Date
26	North Dorchester	Violations	Inspector	Date
27	North Dorchester	Violations	Inspector	Date
28	North Dorchester	Violations	Inspector	Date
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94	North Dorchester	Violations	Inspector	Date
95	North Dorchester	Violations	Inspector	Date
96	North Dorchester	Violations	Inspector	Date
97	North Dorchester	Violations	Inspector	Date
98	North Dorchester	Violations	Inspector	Date
99	North Dorchester	Violations	Inspector	Date
100	North Dorchester	Violations	Inspector	Date

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*Bad Patch Locations*

# Conclusion

- \* Utility network key component in Boston's future.
- \* Upgrade, repair, and maintenance must be performed in a professional manner.
- \* Teamwork is critical in delivering shared goal of a superior infrastructure to Boston's Citizens.

**SEE YOU OUT IN THE STREETS**